



LIBRARY OF THE  
UNIVERSITY OF ILLINOIS  
AT URBANA-CHAMPAIGN

IN MEMORY OF  
STEWART S. HOWE  
JOURNALISM CLASS OF 1928

STEWART S. HOWE FOUNDATION

610.9773

I l 6 h .

v. 2

cop. 5

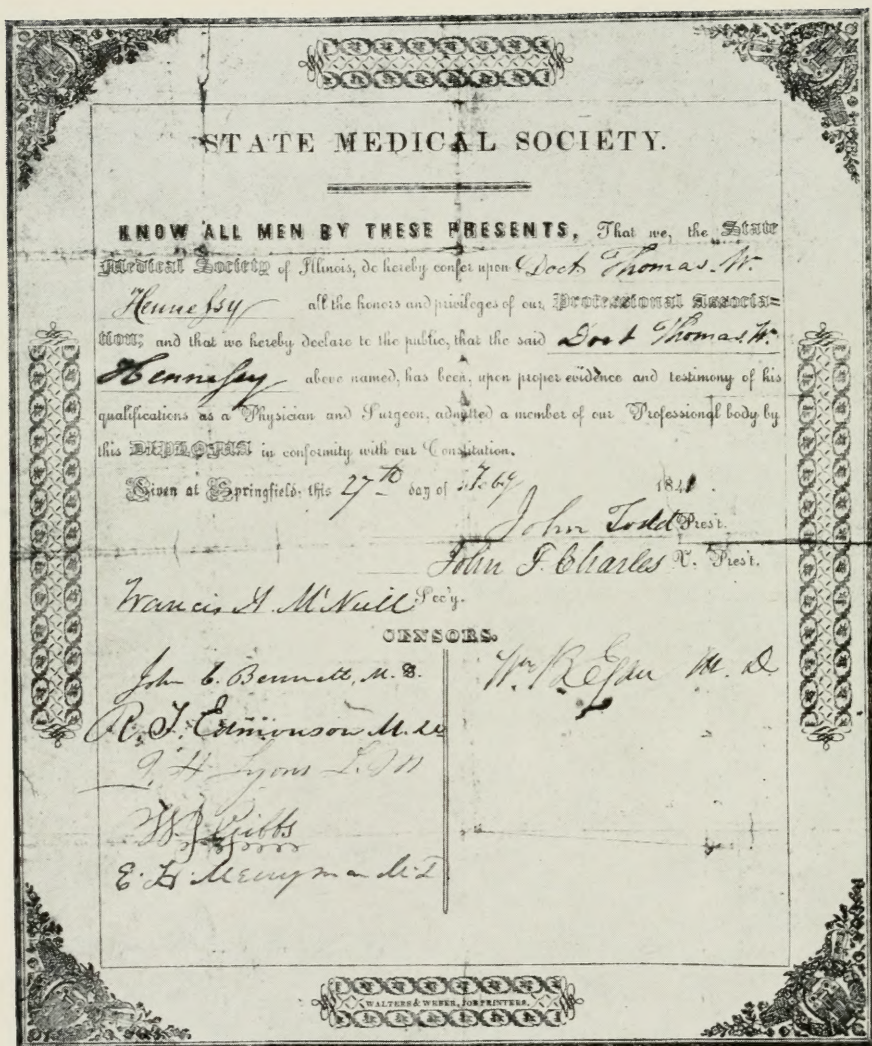
I. H. S.





Frank. W. Phillips  
in appreciation for  
valuable information  
contained in one Chapter  
of this book

~~Forwarded~~ in letter m  
10-17-53



Reproduction of an 1841 Certificate of Membership in the Illinois State Medical Society



# HISTORY OF MEDICAL PRACTICE IN ILLINOIS

Volume II: 1850-1900

*Issued by*

THE ILLINOIS STATE MEDICAL  
SOCIETY

*Approximately A Century After the  
Reorganization of the Society in 1850*

ARRANGED AND EDITED BY

DAVID J. DAVIS, M.D., Ph.D.

Permanent Historian and Member of the Permanent Committee on Archives of the Illinois State Medical Society; Member of the Illinois State Historical Society; Dean of the University of Illinois College of Medicine 1924-43, Dean Emeritus, 1943 to date; Professor and Head of the Department of Pathology of the University of Illinois College of Medicine 1913-43, Professor Emeritus 1943 to date.

CHICAGO • 1955

COPYRIGHT 1955, BY  
THE ILLINOIS STATE MEDICAL SOCIETY

*The Lakeside Press, R. R. Donnelley & Sons Company  
Chicago, Illinois, and Crawfordsville, Indiana*



610,9773  
Il 6 h  
v. 2  
cop 5

Ill Hist Surv.

## A Tribute to Dr. D. J. Davis

THIS second volume of the history of medicine in Illinois is the last great service to medicine by the late David John Davis, M.D., of Chicago, Permanent Historian of the Illinois State Medical Society. It may well serve as his lasting monument.

Dr. Davis died suddenly December 19, 1954, as the first galley proofs of this volume were beginning to come from the printer. On recommendation of this Committee on Medical History and by the direction of the Council of the Illinois State Medical Society, he had served as editor of this volume. Without his service and counsel, we believe, there would have been no Volume II.

As Wilber E. Post, M.D., his friend of many years, pointed out in a memorial published in *The Illinois Medical Journal* (February, 1955), Dr. Davis' professional activities resulted in many important contributions to medicine in research, in teaching and in educational administration.

Dr. Davis, for instance, performed the first tuberculosis test on a herd of cows in Wisconsin and one of the first in the United States. He was the first to be granted the degree of Ph.D. in pathology at the University of Chicago. He was the first in Chicago and one of the first in the United States to demonstrate the Negri bodies of rabies in the brains of humans and animals. And, with Dr. Joseph A. Capps, he established the cause of an epidemic of septic sore throat in Chicago as a bacterium later known as the streptococcus epidemicus of Davis, which led to important changes in the control of Chicago's milk supply.

In 1913, Dr. Davis became Professor and Head of the Department of Pathology of the College of Medicine of the University of Illinois. In 1924 he became Dean of that institution. He held both these appointments until his retirement in 1943.

But, in addition to his contributions to scientific medicine, Dr. Davis was also interested in medical history. Among his more than 100 papers are a number on historical subjects. His description of the search for and the discovery and identification of the body of John Paul Jones, American Revolutionary naval hero, is a classic. An endowed lectureship in medical history has been established in his honor at the University of Illinois College of Medicine.

After his retirement, Dr. Davis, anxious to continue serving his profession and the public, undertook the editorship of this volume. He realized, better perhaps than anyone else, how much labor and responsibility this entailed. But he took great interest in it and was actually the agent who finally brought it to completion. He had worked on this manuscript for almost two years. He had read it, edited and re-edited it, until he was satisfied that it was in proper form for publication, and he even checked some of the galley proof as it came from the printers.

With all his greatness, Dr. Davis was a modest man. The Committee on Medical History of the Illinois State Medical Society had considerable difficulty in persuading him to tell even a little about himself for use on the title page of this volume, and he absolutely refused permission for his picture to appear in this book.

Throughout their years of working together, the Committee found Dr. Davis always enthusiastic, helpful, forceful and stimulating. His death is here recorded with sincere sorrow, and our debt with appreciation and gratitude.

THE COMMITTEE ON MEDICAL HISTORY  
ILLINOIS STATE MEDICAL SOCIETY



## PREFACE

VARIOUS members of the Illinois State Medical Society made contributions to medical history almost from the time of the Society's reorganization (see p. 110, 127 and 129). The first official effort in this field probably occurred about 1882 (see p. 73 and 74). Dr. J. H. Hollister in 1889 announced that such a history might be published near the end of the century, but he died in 1911 and the history was never published.

In 1893, the House of Delegates directed Dr. W. O. Ensign of Rutland to prepare a history of the Society for presentation at its annual meeting in 1894. Dr. Ensign became ill and did not attend that meeting. However, in 1895 he was Chairman of the Committee on Medical Societies which made a special report on the history of the Illinois State Medical Society. The history was never published.

In 1913, on order of the Council, Dr. Carl E. Black of Jacksonville issued a general index of the Society transactions and reports for the purpose of making the early Society proceedings generally available. Before the *Illinois Medical Journal* was founded in 1900, the transactions of the Society were issued annually in bound volumes containing varied collections of data: titles of papers, discussants, registration lists, proceedings of the House of Delegates, etc. Dr. Black's index of this material has been serviceable in many ways. It was intended, he said, to stimulate other men to write more detailed histories.

At the annual meeting of the Society in 1924, in which year Dr. E. H. Ochsner of Chicago was President and Dr. C. J. Whalen of Chicago was Editor of the *Illinois Medical Journal*, the House of Delegates authorized the appointment of a committee to proceed at once with the preparation of the "History of Medical Practice in Illinois." The History Committee as finally constituted and printed in Volume I was as follows:<sup>1</sup>

Dr. Charles J. Whalen, Chicago,  
Chairman  
Dr. C. E. Black, Jacksonville  
Dr. George A. Dicus, Streator  
Dr. James H. Hutton, Chicago

Dr. C. B. Johnson, Champaign  
Dr. George H. Weaver, Chicago  
Dr. O. B. Will, Peoria  
Dr. Lucius H. Zeuch, Chicago

In 1927 there was published the initial volume (Volume I) of the series authorized by the House. Dr. Zeuch had been appointed Editor and was largely responsible for the collection of data and for the writing and ar-

<sup>1</sup> At the present time (1954), Dr. James H. Hutton and Dr. George A. Dicus are the only living members of this original committee; recently Dr. Dicus was named the state's most distinguished general practitioner. Dr. Harold Camp was in 1924 Secretary of the Society and still continues in that office; in an *ex officio* capacity he has served the committees most effectively through the years.

rangement of the material for publication. The value of Volume I is increasing from year to year as a historical contribution. It is replete with all phases of medical data from the earliest years of medical practice in Illinois up to 1850. Its index and bibliography list of early medical literature are especially valuable.<sup>2</sup>

In 1947 the Council of the Illinois State Medical Society, on recommendation of the Medical Service and Public Relations Committee, resolved to publish a second volume as a continuation of the series on "The History of Medical Practice in Illinois," to cover the period 1850 to 1900. For this purpose the following were appointed to serve as a Committee on Medical History:

Dr. James H. Hutton, Chicago,  
Chairman  
Dr. Josiah J. Moore, Chicago  
Dr. David J. Davis, Wilmette  
Dr. E. H. Weld, Rockford  
Dr. George H. Coleman, Chicago  
Dr. James P. Simonds, Chicago  
Dr. Charles P. Blair, Monmouth  
Dr. Tom Kirkwood, Lawrenceville  
Dr. Otto Kampmeier, Chicago

Dr. William A. Mann, Chicago  
Dr. Frederick W. Merrifield, Wilmette  
Dr. Kellogg Speed, Highland Park  
Dr. Archibald L. Hoyne, Chicago  
Dr. B. Barker Beeson, Chicago  
Dr. D. B. Monroe, Alton  
Miss Ella Salmonsens, Chicago, Chief of  
Medical Department, John Crerar  
Library.

With little change this committee has served faithfully for the several years necessary to complete the task. Meetings have been held at short intervals, mostly in Chicago because of the transportation problem. Time and effort have been sacrificed freely by the committee members, to whom the Society must remain deeply obligated. Especially is this true of those who devoted their time and talent to the special contributions which make up practically the entire volume. The contributors were selected because of their scientific and medical eminence in the profession of the state and their interest in medical history.

While Volume II of "The History of Medical Practice in Illinois" is intended primarily as a record of the professional problems and progress of the medical men and women during the years 1850 to 1900, it also reveals the wider rôle played by physicians as citizens, whether they acted individually or through their various societies. The Illinois State Medical Society was the force behind the establishment of certain of the state's welfare institutions, such as the School for the Feeble-minded at Lincoln. After working for sixty years (1817 to 1877), the profession was also responsible for the creation of the State Department of Public Health on a permanent basis. By city ordinance in 1860, Chicago unbelievably wiped out nearly

<sup>2</sup> Volume I, containing 713 pages, was published in 1927 by The Book Press, Inc., Chicago. A number of copies are still available in the office of the Secretary of the Illinois State Medical Society at Monmouth, Illinois.



all of its local health department facilities; the cholera epidemic of 1866 was undoubtedly and justifiably used by some of the prominent physicians of that time to frighten the city fathers into passing an ordinance which laid the foundation for the present Chicago Health Department. Some of the early individual members of the profession founded schools and colleges in Illinois, some of which bear their names as founders: Dr. B. F. Edwards was active in aiding the establishment of Monticello Seminary and Shurtleff College in Alton; Dr. John H. Evans was largely instrumental in founding Northwestern University; Evanston was named after him and its Davis Street was named after his good friend, Dr. N. S. Davis. (See Vol. I for more details on this subject.)

Others of these early practitioners were deeply religious and were active in founding churches; some were active in politics as mayors or members of the State Legislature and Dr. W. H. Bissel of St. Clair County was inaugurated as Governor on January 12, 1857. Still others were editors, authors, etc.

In general, the physicians of that era were more active in civic affairs than are the doctors of today. However, their professional activities were not as time-consuming as they are at the present time, and they were not engulfed in the sea of literature or in special societies that today require so much time.

To obviate a recurrence of the situation following Dr. Zeuch's death,<sup>3</sup> and from the many years of experience that the Illinois State Medical Society has had in the preparation of its history and the collection and disposition of its historical records, two decisions have been reached: (1) For purposes of safety and continuity, an active committee, such as the one now at work, should be perpetuated and should assemble from time to time for the discussion of the historical problems always at hand before the Society. This committee should cooperate with the Permanent Historian and with the Committee on Archives. (2) It seemed evident that there should be an official Compiler of Records located in a fire-proof building, since many valuable and irreplaceable Society records are at present not adequately arranged or properly protected against disaster. Towards that end, the John Crerar Medical Library in Chicago has been made the central official depository for the present history work of the Society with its Medical Librarian, Miss Ella Salmonsens, as the compiler of such data.

The work of the Committee on Medical History to publish Volume II has now been completed but the Society's recording of medical historical

<sup>3</sup> Unfortunately, Dr. Zeuch died very shortly after Volume I was finished in 1927. With his death disappeared nearly all the committee's records and documents. This was a serious handicap for the work on Volume II and will be for all future historical efforts in the Illinois State Medical Society.

events will continue. Even as this material goes to the publisher there are interesting problems facing the future historians:

1. The collection and arrangement of data anticipated for Volume III.
2. The further collection of data for the proposed Medical Biographical Encyclopedia (or Dictionary) for the physicians of Illinois. A large number of medical biographies already are assembled in the Crerar and other libraries in the state.
3. An adequate medical history of Illinois during the war periods: Mexican, Indian, Civil, Spanish, etc.
4. Encouragement and aid to County Medical Societies of Illinois for the preparation of local medical histories.
5. The preparation of a popular medical history of Illinois covering its first 100 years, roughly up to 1900.

The physicians of Illinois should keep in mind that it was the Council of the State Medical Society that created the Committee on Medical History and thus made possible the consummation of the entire project. Many changes have taken place in the personnel of the Council since the work was first undertaken in 1947, at which time its members were:

Dr. Walter Stevenson, Quincy, Chairman	
Dr. Robert S. Berghoff, Chicago President	Dr. Leo P. A. Sweeney, Chicago
Dr. Harold M. Camp, Monmouth, Secretary	Dr. H. Prather Saunders, Chicago
Dr. L. J. Hughes, Elgin	Dr. Charles P. Blair, Monmouth
Dr. Percy E. Hopkins, Chicago	Dr. Ralph P. Peairs, Normal
Dr. Oscar Hawkinson, Oak Park	Dr. Charles H. Hulick, Shelbyville
Dr. Edgar C. Cook, Mendota	Dr. Charles O. Lane, West Frankfort
Dr. H. M. Hedge, Evanston	Dr. Edwin S. Hamilton, Kankakee
Dr. Wade C. Harker, Chicago	Dr. Harlan English, Danville
	Dr. G. C. Otrich, Belleville
	Dr. Everett P. Coleman, Canton

During the period of the committee's work, the following have occupied the office of President of the State Society:

Dr. Robert S. Berghoff, Chicago 1946-47	Dr. Walter Stevenson, Quincy, 1949-50
Dr. Irving H. Neece, Decatur, 1947-48	Dr. Harry M. Hedge, Evanston, 1950-51
Dr. Percy E. Hopkins, Chicago, 1948-49	Dr. C. Paul White, Kewanee, 1951-52
Dr. Leo P. A. Sweeney, Chicago, 1952-53	

In 1954, the Council was made up of the following members:

Dr. F. Lee Stone, Chicago, Chairman until June 1954	Dr. Harold M. Camp, Monmouth, Secretary
Dr. Joseph T. O'Neill, Ottawa, Chair- man after June 1954	Dr. Joseph S. Lundholm, Rockford, de- ceased, succeeded by
Dr. Willis I. Lewis, Herrin, President until the annual meeting in May 1954	Dr. Carl E. Clark, Sycamore
Dr. Arkell M. Vaughn, Chicago, Presi- dent after the annual meeting in May 1954	Dr. R. C. Oldfield, Oak Park
	Dr. John L. Reichert, Chicago
	Dr. George A. Hellmuth, Chicago, moved out of the state, succeeded by
	Dr. Earl H. Blair, Chicago



Dr. E. A. Piszczek, Chicago	Dr. Harlan English, Danville
Dr. H. Close Hesseltine, Chicago	Dr. Burtis E. Montgomery, Harrisburg
Dr. Charles P. Blair, Monmouth	Dr. Willard W. Fullerton, Sparta
Dr. Jacob E. Reisch, Springfield	Dr. Edwin S. Hamilton, Kankakee
Dr. Warner H. Newcomb, Jacksonville	Dr. Leo P. A. Sweeney, Chicago
Dr. Arthur F. Goodyear, Decatur	

The following have been Chairman of the Council:

Dr. Walter Stevenson, Quincy	Dr. Oscar Hawkinson, Oak Park
Dr. Harry M. Hedge, Evanston	Dr. Charles P. Blair, Monmouth
Dr. F. Lee Stone, Chicago	

At its meeting on August 8, 1954, the Council voted that a Publication Committee be appointed to negotiate with publishers relative to publication of Volume II. The members on this committee were:

Dr. Joseph T. O'Neill, Ottawa	Dr. John L. Reichert, Chicago
Dr. F. Lee Stone, Chicago	Dr. James H. Hutton, Chicago,
Dr. Charles P. Blair, Monmouth	Chairman
Dr. R. C. Oldfield, Oak Park	

*Ex officio* members: Dr. Arkell M. Vaughn, Chicago, President  
Dr. Harold M. Camp, Monmouth, Secretary

It is a pleasure to state that the Committee on Medical History has enjoyed the cooperation of the Council at all times. It appreciates their support as well as their patience. Compiling this volume has taken far more time and effort than was expected by anyone when the task was first undertaken.

#### ACKNOWLEDGMENTS

Acknowledgments are herewith extended for the many services and courtesies rendered to the committee by a large number of institutions, libraries, societies and individuals.

Our thanks are due to the John Crerar Library, the Newberry Library, the Chicago Public Library, the Illinois State Library at Springfield (including Dr. Black's collection of medical portraits), and to the medical libraries of the several medical schools and hospitals. The librarians in these institutions have been most courteous.

We are under deep obligation to the Illinois State Historical Society and the Chicago Historical Society.

We are grateful to those county medical societies that have already published local medical histories.

Of the venerable practitioners in the state whom we hold in deep respect, indeed in reverence, only two will be named: Dr. Andy Hall of Mount Vernon, to whom we are obligated for valuable information concerning early practice and practitioners in that region, and Dr. E. B. Montgomery,

the oldest active practitioner in the state, who has given us valuable information especially regarding the practice of obstetrics in and about Quincy and the Military Tract Reservation.

Only a few of the richly deserving individuals can be mentioned: Miss Ella Salmonsens, Chief of the Medical Department of the John Crerar Library who has served as compiler of data for the committee and in many other ways has given freely of her time and talent; Miss Margaret Bates of the Medical Library of the University of Illinois for drawing freely upon her abundant source of medical history; Mrs. Louise B. Searing for her efficient medical secretarial services, especially in the preparation of the contents of these chapters for the press; and Mr. James C. Leary for valuable services, particularly regarding the technical details of the volume and for writing the tribute to Dr. D. J. Davis. Mention should be made of the many courtesies of the printers, especially in the services of Mr. Paul Barton, Mr. Walter M. Sackett and Mr. Albert H. Schlag.

The Chairman has enjoyed his contacts with the various committee members and is indebted to them for their cheerful and unfailing co-operation.

JAMES H. HUTTON, M.D., Chairman  
*Committee on Medical History*



## EDITOR'S FOREWORD

THE period 1850 to 1900 embraces a time in the history of medicine when basic sciences in the western world were developing so rapidly that medical science, especially in its physical aspects, was bound to react correspondingly. It did so, first, by the application to medicine of these general sciences and, second, by innumerable original discoveries in its own special field. This meant more and more special research and more and more special technics. The rise of specialism, therefore, was inevitable. It was also inevitable that the medical personnel in due time—in this instance about 50 years—should become gradually more restricted in their interests though more intense in their efforts.

The first History Committee that dealt with the scope and internal arrangement of the data for Volume I of the "History of Medical Practice in Illinois" was not explicit in setting forth the reasons for limiting that volume to approximately 700 pages nor for their decision to cover a period of time from the early beginnings of medicine in Illinois up to 1850. Nowhere in the volume are these points clearly analyzed or defined. We are obliged to assume that under the circumstances that existed at the time, such factors as available data, costs, personnel, size of volume and, no doubt, others of a similar nature determined the final conclusions of those who were designated to complete the project. It should be said here, as has been said elsewhere, that following the issue of Volume I, all records and papers pertaining to that volume promptly disappeared with the death of the editor, Dr. Zeuch, which occurred just at that time (1927).

The period "Preceding 1850" having been covered in Volume I, the second period naturally followed from 1850 forward. But how far forward? After long discussions by the Committee, especially of the material at hand during the latter half of the 19th century, it seemed wise to confine the scope of Volume II to approximately the fifty years from 1850 to 1900. There were several other reasons relating especially to the chronology of events in medical history. Without splitting hairs over the exact years, they were as follows:

1. It was in about 1850 that both the American Medical Association and the Illinois State Medical Society were formed. A few special societies and specialty journals were started about that time.
2. Discoveries were announced during that period that made possible the great advances in surgery, namely the use of anesthetics (ether, chloroform), and in the 1860's the discoveries of Pasteur which soon made possible the antiseptic and aseptic periods of Lister.
3. The cellular pathology of Virchow (1859) stimulated studies on the nature of disease throughout the medical world.

4. There followed the tremendous outburst of progress in the 1870's and the 1880's resulting in the firm establishment of the germ theory of infectious diseases and soon in its general application to surgery and other "compartments" of medicine.

5. Also emerging from the above were sanitation, pasteurization, vaccines, serum therapy, specific diagnosis, specific and chemical therapy, etc.

6. From the above activities, the several specialties arose relatively rapidly so that by about 1900 they were fairly well defined and the application of their technics had begun. Here seemed to be a logical point to conclude the rise of that great period in the western medical world that has been referred to many times as "medicine's most brilliant age."

7. Illinois was beginning to do its part. During this half-century, among other contributions was the work of several noted Illinois surgeons: Brainard, Prince, Andrews, Fenger, Senn, Murphy and others—a galaxy so eminent as to be rarely encountered in recorded surgical history. Detailed accounts of the accomplishments of these men as well as of many others are recorded in the several chapters on the surgical specialties.

8. A chapter on the early years of bacteriology tells of the many contributions made in Illinois at a time just preceding the turn of the century.

The above facts, together with many other conspicuous advances, seemed to justify the approximate period 1850 to 1900 as a suitable one within which to confine the contents of the forthcoming volume.

As will be pointed out in greater detail in Chapter V of this second volume, it was found that to obtain the most complete and intimate coverage of the beginnings of the specialties, it would be necessary to depend upon specialists themselves. We may speak of these persons as "grass roots" writers and workers. The selection of these writers was based on the fact that they were contributors for years to the various medical textbooks and journals, both general and special. Indeed, American medical literature is essentially what these workers (and their colleagues all over the country) have made it during the past century.

In a historical series such as is contemplated in these volumes, the element of continuity should be respected as far as possible. The contents of Volume II should dovetail with the contents of Volume I. They should be read serially. The fact that the contributors are different persons with different training and experiences and even belonging to a different generation will naturally place certain limitations upon a homogeneous whole. While there may be some disadvantages in this arrangement, it is probably true that distance in time and even in place may permit the authors a greater perspective, less prejudice and a fairer and more unbiased judgment concerning the multitude of facts and experiences before them.

In the final pages of Volume I, the editor, foreseeing these problems of continuity quite as we now are viewing them in retrospect, wrote certain paragraphs which seem helpful for purposes of transition. On pages 649

and 650 he commented on the "Fallacious Beliefs of Early Practitioners" as follows: "The practitioners previous to 1850 had not as yet begun to grasp the revolutionary idea of micro-organisms as offending factors in the production of disease. . . . Many of them still believed in the unity of disease. . . . They thought fever to be a salutary effort of Nature to throw off from the system some noxious matter. . . . Coming out of this general idea, bloodletting became a popular procedure to drain the body of these bad humors." Again he says that only in the last year of his period (1849), "Pollender discovered the key to modern medicine—small rod shaped bodies in the blood of animals suffering from anthrax." The later work of Pasteur, Koch, Klebs, Ehrlich and others, especially by animal inoculations, clarified much and served as a "magic key to secrets long locked up, and opened up a great auto-chamber with many compartments." In Volume II it will be noted that time and again the records are largely dominated by this "magic key" of research to open up these many compartments. This is the primary reason, beginning just at the middle of the 1800's and reaching a climax toward the end of the century, for the development of these "compartments" that we now call the "specialties."

In a volume contributed by a number of authors, the problem of homogeneity of composition and style naturally arises. There can be no doubt about this variety from chapter to chapter. It is there and is inevitable in such a composite volume. We may plead however that, desirable as a certain degree of uniformity may be, Volume II possesses this uniformity to about the same degree as do the various issues of our weekly and monthly medical journals with which we are all familiar in our daily readings. Then, too, doctors are individualists both in their work and in their writings and expressions (who would say Dr. Fenger was like any other person?), and we comment on and value their differences and eccentricities. It is one of the main elements that contributes to an interesting medical history.

From the above statements it is evident that this volume is written primarily for the medical profession. It will find its greatest usefulness as a reference work, though much information is contained therein which should and will be of value, especially to the reading and writing public who may be interested in obtaining a wider appreciation of what the doctors of Illinois have done in the past in caring for the sick.

DAVID J. DAVIS, M.D.





# TABLE OF CONTENTS

## Frontispiece

	PAGE
PREFACE, <i>James H. Hutton</i> . . . . .	vii
EDITOR'S FOREWORD, <i>David J. Davis</i> . . . . .	xiii
CHAPTER	
I. INTRODUCTION, <i>David J. Davis</i> . . . . .	3
II. MEDICAL GEOGRAPHY IN ILLINOIS, <i>David J. Davis</i> . . . .	7
III. THE HARDY PIONEER: HOW HE LIVED IN THE EARLY MIDDLE WEST, <i>Paul M. Angle</i> . . . . .	26
IV. ORGANIZATION OF THE ILLINOIS STATE MEDICAL SOCIETY: THE HOUSE OF DELEGATES, <i>Frances C. Zimmer</i> . . . .	36
V. THE RISE OF MEDICAL SPECIALISM, <i>David J. Davis</i> . . . .	91
VI. THE GENERAL PRACTITIONER: HIS PREPARATION, ENVIRONMENT AND EXPERIENCES, <i>Tom Kirkwood</i> . . . .	99
VII. INTERNAL MEDICINE, <i>George H. Coleman</i> . . . . .	108
VIII. GENERAL SURGERY, <i>Kellogg Speed</i> . . . . .	153
IX. OBSTETRICS AND GYNECOLOGY, <i>Frederick H. Falls</i> . . . .	211
X. CONTAGIOUS DISEASES, <i>Archibald L. Hoyne</i> . . . . .	239
XI. PEDIATRICS, <i>Archibald L. Hoyne</i> . . . . .	245
XII. OPHTHALMOLOGY, <i>William A. Mann</i> . . . . .	251
XIII. OTOLARYNGOLOGY, <i>Alfred Lewy and Francis L. Lederer</i> . .	280
XIV. DERMATOLOGY, <i>B. Barker Beeson</i> . . . . .	306
XV. NEUROPSYCHIATRY, <i>Oscar Hawkinson</i> , . . . . .	314
XVI. PLASTIC AND RECONSTRUCTIVE SURGERY <i>Frederick W. Merrifield and Walter W. Dalitsch</i> . . . .	329
XVII. PATHOLOGY, <i>Edwin F. Hirsch</i> . . . . .	339

XVIII.	MEDICAL BACTERIOLOGY:	
	NOTES ON THE HISTORY OF BACTERIOLOGY IN CHICAGO PRIOR TO THE ORGANIZATION OF BACTERIOLOGIC TEACHING (ABOUT 1900). <i>Ludvig Hektoen</i> . . . . .	343
	THE INTRODUCTION OF BACTERIOLOGY INTO THE MEDICAL CURRICULUM IN CHICAGO. <i>George H. Weaver</i> . . .	356
	THE INTRODUCTION OF BACTERIOLOGY INTO THE SERVICE OF PUBLIC HEALTH IN CHICAGO <i>Fred O. Tonney</i> . . . . .	357
XIX.	HISTORY OF THE ANATOMY LAWS IN ILLINOIS DURING THE 19th CENTURY. <i>Otto F. Kampmeier</i> . . . . .	361
XX.	PHYSIOLOGY. <i>Carlos I. Reed</i> . . . . .	403
XXI.	MEDICAL EDUCATION:	
	INTRODUCTION. <i>David J. Davis</i> . . . . .	413
	RUSH MEDICAL COLLEGE. <i>Norman Bridge and John E. Rhodes</i> . . . . .	416
	NORTHWESTERN UNIVERSITY MEDICAL SCHOOL <i>Samuel J. Jones</i> . . . . .	425
	COLLEGE OF PHYSICIANS AND SURGEONS OF CHICAGO. <i>D. A. K. Steele</i> . . . . .	431
	WOMAN'S MEDICAL COLLEGE. <i>Helga Ruud</i> . . . . .	441
	OTHER MEDICAL SCHOOLS ESTABLISHED DURING THE 19th CENTURY. <i>Otto F. Kampmeier</i> . . . . .	449
XXII.	MEDICAL LIBRARIES. <i>Otto F. Kampmeier</i> . . . . .	455
XXIII.	ILLINOIS TRAINING SCHOOL FOR NURSES. <i>Grace Fay Schryer</i> .	473
XXIV.	MEDICAL JOURNALISM <i>Morris Fishbein, and Barbara Fishbein Friedell with the assistance of Ella M. Salmonsens and Mrs. John Van Prohaska</i> . . .	480
XXV.	EARLY MEDICAL SOCIETIES. <i>Harold M. Camp</i> . . . . .	489
APPENDIX	. . . . .	502
INDEX	. . . . .	509



HISTORY OF  
MEDICAL PRACTICE IN ILLINOIS



## CHAPTER I

# INTRODUCTION

By DAVID J. DAVIS, M.D.

OVER a century ago Drake<sup>1</sup> published his monumental work on diseases of the Mississippi Valley. This was issued after years of travel and research, including extensive correspondence with physicians and other well-informed persons living in this region. His observations covered a wide variety of subjects related to health and disease: climate, weather, rainfall, temperature, fauna, flora, geology, soil, lakes, rivers, hills, valleys, swamps, forests, topography, winds, etc. He also included a discussion of the races living in the region and the relations of the above factors to them.

These extensive data concerned chiefly the infectious diseases as they were known in the years 1840 to 1850. Much of the country was then primitive. Also identification of many diseases was definitely limited from lack of medical knowledge, especially of methods of diagnosis. Drake's observations, however, have been of great value historically and from the standpoint of medical geography. His early data, especially on fevers, intestinal disease, pulmonary afflictions, cholera and milk sickness, deserve commendation. In Illinois he traversed wide areas at the very time when many such afflictions reached their highest prevalence and when the Illinois Country was known widely as a "land of pestilence." He commented in detail on regions adjacent to the Kaskaskia, Illinois, Kankakee and Rock Rivers and the Lake Michigan Basin. He described the regional forests, especially along the river valleys, and their relation to the "Grand Prairie" which he said was the most extensive open prairie land east of the Mississippi River. Comment was also made on the incidence of the autumnal fevers (malaria) in the various localities as reported to him by the many pioneer physicians he consulted along the way. His remarks about the Chicago region and the topographical data given by him at that early date are most intriguing.

Drake's writings, the most comprehensive and authoritative contributions to the practical medicine of the Central West, were made just at the beginning of the period covered by this Volume, 1850 to 1900. In addition, his interesting and informative data and opinions on such subjects as lodg-

<sup>1</sup> Drake, Daniel: *A Systematic Treatise Historical, Etiological and Practical on the Principal Diseases of the Interior Valley of North America*. Book I, 1850, Cincinnati, W. B. Smith & Co.; Book II, 1854, Philadelphia, Lippincott, Grambo & Co.



ing, clothing, bathing, habitations, etc., are valuable items in the early history of primitive medicine in Illinois.

On page 701 of Book I, Drake attempted to do what few physicians would have dared, namely, to hazard certain predictions as to the future of several regional diseases, as follows:

1. Autumnal fever (malaria) would decrease, and typhus and typhoid would become more prevalent.
2. Gout would occur more often.
3. Diseases produced by the intemperate use of ardent spirits would diminish.
4. Consumption and scrofula would increase.
5. Apoplexy, palsy and epilepsy would become more frequent.
6. Diseases of the liver would become less, and those of the mucous membrane of the bowels more prevalent.
7. Mental alienation would be more frequent.

These are intriguing predictions, made with surprising accuracy over 100 years ago. Could any of us do much better today were we to hazard predictions as to the course of any representative group of our current diseases during the next 100 years? Drake was indeed a man of imagination.

Rawlings<sup>2</sup> has traced the introduction of diseases into the Illinois country by the Europeans and later by the Americans themselves. A wealth of data is presented, supported by adequate references. The work is profusely illustrated by charts and tables obtained from an analysis of the early records and the later reports of the State Department of Public Health. There is included also a clear picture of the evolution of the methods of control and of the legal procedures necessary for the adequate protection of the public against disease in a typical American state of the Midwest.

Rawlings' material deals primarily with the infections, especially those of an epidemic nature, and covers roughly the first 200 years of this region. During the earliest period, almost continuous epidemics of smallpox were noted, with emphasis upon the high susceptibility of the Indians to this disease. The later epidemics of Asiatic cholera (1832, 1849), dysentery, and the early devastations of malaria in the state were noted.

The tables on page 89 of Rawlings' work show an almost unbelievably high death rate, especially for children. The percentage of deaths in children under five years of age in relation to deaths of all ages in Chicago in the year 1871 was 70.7 and in the year 1870 it was 62.8 per cent. These high rates, though gradually declining, continued until well past the end of the century. Following the general rise of many infectious diseases after the Civil War and again toward the end of the period, the percentages all showed a tendency to decline with a few notable variations naturally.

<sup>2</sup> Rawlings, I. D.: *The Rise and Fall of Disease in Illinois*. 1927. Published by the Illinois State Department of Public Health.

Smillie<sup>3</sup> wrote on epidemics in this country from 1800 to 1875, and Illinois is included in this study. Malaria rose to its greatest height at approximately 1850 and subsequently at intervals became violent, especially during the Civil War. On page 39, Smillie presents an instructive death rate chart for Chicago for the period 1845 to 1900, corresponding almost exactly with our half-century period 1850 to 1900. The chart shows that Chicago's period of epidemics lasted from 1848 to 1890. Cholera, smallpox and typhoid fever were the periodic destroyers of life, but from 1868 to 1873 the important and persistent causes of death were tuberculosis, infant diarrhea and pneumonia.

Hamilton<sup>\*4</sup> also stressed the prevalence of several epidemic diseases which Rawlings and others later analyzed at greater length. In particular, his contribution to Asiatic cholera and smallpox is especially noteworthy.

The period 1850 to 1900 well exemplifies a principle often overlooked but yet so evident in the study of medicine, namely, that the mass action of practically all diseases over the years is an important and a very realistic problem. Diseases, like all other biologic processes, which are ever-changing and dynamic mass phenomena, at times rising, again falling, or perhaps continuing on an irregular base, always reveal reactions *en masse* or individually to a complex environment. These phenomena are revealed in every chapter of this Volume.

The above statements concerning the data of the period under consideration are set forth in this Introduction in order both to indicate and to emphasize the prevalent serious diseases that confronted the physicians of the state at that time in their practice from day to day.

This Introduction also would not be adequate did it not refer to the contributions made to the history of the practice of medicine in Illinois by non-medical writers from the popular point of view. So important is this considered that a condensed chapter of excerpts has been devoted to this phase of the history written by an authority in general history of Illinois, Dr. Paul Angle, Director of the Chicago Historical Society (see Chapter III). Among other general historical writings is a volume by Pickard and Buley<sup>5</sup> which is a "by product of more extensive work in the field of mid-western history." The data are presented objectively by these lay persons and is written in popular style for the people of the Midwest region. It is a résumé of the "reactions of the early settlers to his diseases—fevers, con-

<sup>3</sup> Smillie, W. G.: *The History of American Epidemiology*, 1952. C. V. Mosby Co., St. Louis, Mo.

<sup>\*</sup> Hamilton was for a short time Surgeon General of the U.S. Public Health Service. He died in 1898.

<sup>4</sup> Hamilton, John B.: The Epidemics of Chicago. *Bull. Soc. Med. History*, 1: 73, 1911.

<sup>5</sup> Pickard, M. E., and Buley, R. C.: *The Midwest Pioneer: His Ills, Cures and Doctors*. 1945. Banta, Crawfordsville, Ind.

tagions, epidemics, accidents, injuries, exposure—to his remedies, mostly home medicines, quack pills and pain killers, and finally to the Doctors who so often arrived only after long and anxious delays, or perhaps not at all.”

It is pertinent to refer again to the early chapters of Volume I of this series which are very properly devoted to a discussion of many of the physiographic features of the Illinois country and adjacent territories. A number of authoritative maps are presented, illustrating the basic features of the early and late geologic formations of the region. There is also a discussion of the changes occurring during later periods and the condition of the land surfaces preceding and during the earlier biologic eras. The editor of Volume I covered especially the medical history of the American Bottom and some other Illinois regions along waterways where the early Indians were prone to congregate and where the first French settlers came into intimate relations with them. Historical maps of these areas, drawn by the editor, indicated the location of Indian tribes and villages, including the early French missions.

The editor of Volume I also was conscious of the broad principle of history, namely, that in order adequately to cover any special field historically, it is necessary to be familiar with the basic facts and background of the general history of that region. His contribution in that volume is, therefore, replete with data dealing with the people: who they were, whence they came, how they lived, their health problems and their diseases, and the physiography of the country.



## CHAPTER II

# MEDICAL GEOGRAPHY OF ILLINOIS

By DAVID J. DAVIS, M.D.

### PHYSIOGRAPHY AND DISEASE

ILLINOIS has been called the hub of America, situated as it is in the heart of the great Mississippi Valley. It is shaped somewhat like a wedge with bulging side and a flat top. Water, chiefly as rivers, largely encircles it. Its area is 56,665 square miles. It lies between north latitude  $47^{\circ}$  and  $42^{\circ}.30'$  and in longitude between  $87^{\circ}.35'$  and  $91^{\circ}.31'$ . It has an annual rainfall of 35 inches, approximately. The summers are hot and the winters are cold. Weather conditions are largely determined by the fairly regular cyclonic and anticyclonic atmospheric movements that characterize the Middle West generally. These movements are such as to predispose to frequent deadly tornadoes in the spring of the year.

Illinois is a rich, prosperous region where corn, soybeans, grains, fruit trees, livestock, clovers, grasses, vegetables, trees and shrubs luxuriate, and where mosquitoes, flies, ticks and many other insects thrive. Beneath its fertile soil occur here and there prodigious amounts of coal, oil, lime rock, and many valuable minerals too numerous to mention here.

In 1850, there resided in the state a population of 851,470. By 1900, this had increased to 4,821,550, of which number about 5 per cent were Negroes. The number of American Indians was insignificant.

Chicago, the second largest city in the United States, is located near the northeast corner of the state on Lake Michigan. Several other cities of moderate size are more or less uniformly distributed.

In recent years, the rural and urban health problems have not presented serious difficulties. This was not always true. A half century ago, in order to control such problems, it was necessary to resort to the most monumental sanitary engineering enterprise ever undertaken. This was no less a project than to construct a huge canal, diverting the waters from Lake Michigan of the St. Lawrence River system across the watershed and into the Mississippi River system at a cost of hundreds of millions of dollars. It was a success and saved the lives of millions of people.

The people of Illinois, on the whole, were anything but healthful during the half century 1850 to 1900. Children's diseases, contagions, malaria

and tuberculosis were common. In 1850, the crude overall death rate was 13.85.<sup>1</sup> In 1900, the death rate had fallen to 12.7.

These numerous diseases were naturally associated in many complex ways with the millions of people. In addition to the degenerative and ageing diseases common to all forms of life there were large numbers of parasitic and predatory diseases. These agents include viruses, bacteria, animal parasites, fungi, worms, poisonous animals and plants, and many of the larger mammalia. Man himself has been his own most deadly predator.

The people of Illinois, together with their parasites, are not biologically ancient. One of the objects of this contribution is to tell how some of these relationships between the people and parasites came to be, whence came these people and their parasites. If we attempt to trace this intriguing story backward from the present, we observe interesting landmarks along the way. In 1900, Illinois was just entering the modern sanitation era, with mortality and morbidity curves responding accordingly. During the 1800's many epidemic diseases had reached their all-time maximum in Illinois; for example, in the decades of about that time the malarial years occurred, and 1832 became known—and is still known—as the cholera year.

From 1900 backward we may observe the impact of the diseases of one race upon another; those of the whites and blacks upon the Indians in Illinois, for example. Then receding to the eastern shores of America, we would meet the early French, English and some others arriving with their diseases. Thence back to Europe, Africa and Asia during the 17th and 18th centuries at a time when many deadly plagues and pestilences prevailed and when the common infectious diseases were widely prevalent in both endemic and epidemic forms.

Geographic pathology furnishes no more dramatic example than the mass transfer of these diseases from the Eastern continents to the Americas following the discovery of the latter in 1492.

#### GEOGRAPHIC FEATURES OF ILLINOIS

It was emphasized by the ancients that, in order to understand life phenomena, we must first understand the basic geologic and geographic features from which all life emerges and on which all life depends. Therefore, since all diseases, whether of animals or of plants, concern life phenomena, it becomes evident that the more we study diseases and especially their pathogenesis, the more clearly we appreciate their functional relationships to the physical geography of the region.

Geologists have informed us that in preglacial times, the physiographic features of the Illinois area already had been crudely though definitely outlined. For unnumbered ages, the lands and the seas by systems of vast

<sup>1</sup> Rawlings, I. D.: *Rise and Fall of Disease in Illinois*. 1927. Published by the Illinois State Department of Public Health.

geologic changes resulting in elevations and depressions had exchanged positions repeatedly, depositing and eroding, at times regularly but more often irregularly, enormous masses of earth material. It has also been learned that in later eras there were other alterations resulting in mountains and valleys, together with complex topographic changes in the regions where the Great Lakes and adjacent rivers now are. Much of the Illinois country at one time was lower than at present. Later lime rock was deposited and at present underlies the Chicago region. But far to the north were ancient highlands, rich in elements, minerals, ores, soils and rocks. Here lay *Laurentia*, "the nuclear shield of the North American Continent."

#### THE ICE AGE

Long after the phenomena mentioned above, there occurred in rhythmic sequence another important global event, namely, the succession of massive glaciers which advanced in tongue-like segments from the north and the northeast. The evidence is unmistakable that at least at four different times large regions of the world were denuded by ice and later deluged by the water, soil and rock resulting from the melting and the movements of these glaciers. The Illinois country, in particular, was thus repeatedly washed down and leveled off by these ice-water masses. The ice not only descended from the north and northeast, but at the same time great rivers approached both from the east and west, bearing rich sediments which were deposited along the way. In this manner a covering of rich soil and debris (till) extended over most of the state. With this fertile soil and with favorable rainfall and climate, in postglacial times the plant and animal life found conditions so well adapted for growth and development that few if any regions on the continent have equalled it in the variety and abundance of its fauna and flora.

Associated with living forms, sooner or later the appearance of diseases of one kind or another is the invariable rule, in fact is inevitable in all known biologic systems. Agents of disease—bacteria, viruses, parasites, insects, poisonous plants and animals—and predators in great numbers originated or developed in this early biologic era in Illinois, all engaged in a grand struggle for existence.

The ice, advancing toward the south, covered the entire state with the exception of three small areas: one in the extreme northwest corner in the Galena region, a second in the extreme southern end of the state, and a third just above the junction of the Illinois and Mississippi Rivers. These areas are known as the driftless regions and are differentiated by their more irregular topographic contours, absence of glacier boulders and of recent glacial moraines and their associated phenomena.

If one examines a map of the Illinois moraines (*Bulletin Illinois State*



Geologic Survey), there is clearly seen, in addition to these three driftless areas, a relatively large moraine region occupying roughly the northeastern one-third of the state. The moraines are extensive and, in general, are slightly concave, running from northwest to southeast and parallel with the shoreline of Lake Michigan. Between the ridges, as the ice receded, relatively smooth lowlands were laid bare behind the belts of ridge drifts. These ridges indicated the location where the ice halted from time to time in its recession toward the north. They are clearly evident for many miles in the region just south of Chicago. The moraines are terminal and resulted from the retreat of the most recent glacier, namely the Wisconsin. Of special topographic interest is the Shelbyville moraine located near the middle of the state.

The lower southern and western portion of the state was covered by an earlier glacier called the Illinoian; this was extensive and reached well down to the Ohio River. It occupied roughly one-half of the entire state, and on the moraine maps it is often referred to as the Illinoian drift or till.

#### RIVERS OF ILLINOIS

During these glacial periods, water from the ice accumulated along the lower and southern borders of the ice masses and continued to flow largely toward the southwest through the central and western part of the state, in the valley of the present Illinois River, dividing the state into two nearly equal parts. This southern outlet of Lake Michigan continued as the main drainage channel until relatively recent times when the outflow of the Great Lakes was reversed as the glaciers receded far to the north, resulting in local changes in the elevation of the region. It was at this time that the location of the watershed was determined which has had such profound effect upon the later history of this region. With variations in the lake level and in the amount of water from the melting ice, together with the changes that occurred in the land levels, the watershed finally became more or less fixed approximately where it is today, namely, on a line running approximately south from the Wisconsin area only a few miles from the Lake Michigan shore and curving toward the southeast into Indiana. Since the watershed is a very low one (only 10 to 20 feet), it became an easy matter to re-establish the ancient channel by cutting a canal through the ridge (two already have been dug), a possibility clearly evident to early explorers.

With this watershed established in the northeast corner of the state, the general slope of the land toward the southwest was determined, and many rivers and streams throughout the state were formed or re-established. All were directed toward the south or southwest into the Mississippi River and have continued to drain and to erode the state down to the present time. The main rivers are the Rock, Desplaines and Fox, all arising in Wisconsin,

the Kankakee from the east, the Kaskaskia and branches of the Wabash and Ohio in the southern part. The Kaskaskia is the only large river entirely within the boundaries of the state.

These rivers, flowing from or across the interior of the state, form a complex system thoroughly permeating every part of it, and furnish a drainage system which, though sluggish, is adequate except during periods of excessive precipitation and floods.

On the borders of the state are several of the great rivers of this country, with an approximate mileage as follows: 400 miles of the Mississippi on the west; 100 miles of the Ohio on the southeast, and 150 miles of the Wabash on the east, and on the northeast are 65 miles of the shore of Lake Michigan. No other state in the Union can boast of a more adequate system of fresh waterways. Since the first primitive savages reached the Illinois country up to the present times, these waterways all have been used in a multitude of ways and for a great variety of purposes. For 300 years they were the main thoroughfares for the Indians and early white men, both in their explorations and in their later vast commercial relations.

There have been no prominent elevations within Illinois in recent geologic times. This fact, together with the gentle glaciated slope of the land, has been responsible for the extensive low flat areas, with sluggish streams often flooding laterally, and with an abundance of lakes, ponds, river bottoms, swamps and level prairies. These are significant physiographic features characteristic of many parts of the Illinois country.

#### INDIGENOUS FAUNA AND FLORA

It is well known that, prior to the glacial epoch, there was an abundance of both plant and animal life widely scattered over this territory. This was largely destroyed with the advance of the ice to the south. Some forms were able to survive by proceeding southward in front of the ice, and it is possible that a few forms were able to persist in some manner during these long interglacial periods.

Later, with the reversal of the glacier phenomena by the more rapid melting of the ice, numerous animal and plant forms from adjacent regions (three centers) slowly followed the retreating ice masses, adapting and adjusting themselves to meet the new and colder environment. These forms and their progeny to some degree populate the State of Illinois today and constitute the indigenous flora and fauna. To them have been added newly evolved species and the numerous exotic forms brought into the region during approximately the last 300 years.

Havighurst<sup>2</sup> has given a lucid physiographic description of the Illinois

<sup>2</sup> Havighurst, Walter: *Land of Promise: The Story of the Northwest Territory*. 1946. p. 5. The Macmillan Co., New York.

country as observed by the early white man. "But beyond the upper Wabash River, the Grand Prairie began its long sweep westward. The woods ended and abruptly there was a flood of light. For 250 miles that wavelike plain broken only by thickets of bottom timber along the Kaskaskia, the Sangamon and the Illinois, rolled on to the Mississippi. In Indiana the prairie was a vast pasture of bluestem, tall as a mounted horseman, with occasional swamps of bull grass. Westward in Illinois were whole counties of tall beardgrass mingled with waving stems of cup plant, compass plant, varicolored ox eyes, blazing star, dragonhead, and large purple patches of ironweed. In the shorter grasses grew profuse cone flowers, bluebells and bright bur marigolds. For all its sameness this was a varied landscape. Over its long swales and swells the prairie wore a coat of many colors. In the prairie country occasional stands of trees rose like islands from the grass lands. Here the word 'grove' came into use, and clearing had no meaning. Illinois has groves—Little Grove, Camp Grove, Funks Grove, Downers Grove—as Ohio had plains—in each case the exceptional feature became distinguished. Groves of oak and maple dotted the central prairie but in the North the forest began again. There the open places were exceptional, so the 'oak openings' of Illinois and Wisconsin are meadows framed in timber."<sup>3</sup>

Some of the animals were small, the many rodents for example. Others were large mammals, such as the bison, bear, deer, elk, wolf, fox, beaver, coyote, otter, raccoon, etc. They were multitudinous in numbers and variety, and ranged widely over these regions. In doing so, they followed paths of least resistance and formed well worn trails to sources of food, salt, water, shelter and other necessities of life. They followed rivers, streams, ridges and valleys. They crossed prairies and penetrated swamps and forests. These trails and paths later became important in determining the initial localizations, first, of the Indians, then of modern civilized communities and centers. They also directed the many intercommunicating roads and highways of today.

#### PRIMITIVE MAN ENTERS THE ILLINOIS COUNTRY

It was relatively late in the course of these events that primitive man found his way into this Illinois country. Early records are fragmentary at best. Possibly 20,000 years ago (Krogman), the peoples we now call American Indians (Amerinds) first entered this region from the north and west, presumably having come originally from Asia by way of the present Bering Straits. As in the case of animals, hunger, exposure and curiosity drove

<sup>3</sup> For an adequate discussion of the forests of Illinois and adjacent regions in their physiographic relations the reader is referred to *Deciduous Forests of Eastern North America* by E. L. Braun, 1950, The Blakiston Co., Philadelphia.



them from place to place. They were the first human explorers in this country.

Unfortunately, these first inhabitants could not record their experiences and their wanderings in writing. Even so, interesting and conspicuous evidences of their existence have been transmitted to us in many other ways; for example, the numerous great mounds that dot the country, especially in the central west, the many stone implements, arrowheads and remains of towns and villages, and the many paths, trails and rivers that we use today.<sup>4</sup> All these and many more tell us, in some ways even more clearly than could written records, many things about the lives of these primitive peoples. Of one thing we may be sure: these people (mound builders, Indians, etc.) in some unknown way acquired their own parasites and their own diseases. Our present knowledge of the diseases of that far-distant past is fragmentary and uncertain.

### INDIGENOUS INDIAN DISEASES

It would seem pertinent here to offer more specific information, meager though it be, concerning the diseases afflicting the Indians before the first white man appeared. For this purpose, references are made to statements made by paleopathologists, anthropologists, explorers, missionaries, trappers and pioneers, assuming that such statements were applicable to extensive regions of the country, including Illinois and the Middle West. In every instance this may not be strictly correct, since the diseases at that time, as at present, were not uniformly distributed.

The earliest records of the whites concerning Indian diseases have far more historic value than their later records and observations because the exotic infectious diseases later brought over by the whites were often transmitted to the Indian with great rapidity and their routes of invasion were frequently difficult to follow. No one, with any degree of accuracy, can trace the possible dissemination of diseases that Columbus and his sailors may have carried here in 1492. Much has been made of the possibility that syphilis was transmitted from this hemisphere to Europe by these sailors. Equally pertinent is the question of whether infections were carried here from Europe by these same sailors and, if so, how rapidly were they spread? From what is known of the wide prevalence of diseases in Europe at that time, the existence of many carriers would be certain in such a group; tuberculosis, for example. It is well known that shortly after 1492, the number and variety of transmissible diseases brought over by the increasing European migrations soon reached large proportions.

<sup>4</sup> *The Rivers of America Series*, and *American Trail Series*, together with the several stories of the Great Lakes and the Northwest by Havighurst and others are lucid accounts of these paths and routes and how and why they came to be.

It is necessary to emphasize that all diseases of the natives identified before 1492 should and will be considered indigenous. It is possible that some diseases may have been carried to the Americas from outside sources before 1492, for example by the Norsemen or other undetermined sources. If so, there is no known evidence of the existence of such exotic diseases.

It may be assumed that these peoples suffered from contacts with poisonous plants and poisonous animals already in Illinois. Possibly they suffered, as they do today, from pollen and other sensitizations in the form of skin affections, asthmas, hay fevers and the like. No doubt they suffered from injuries received in hunting the large animals already mentioned, many of which were used for food. Undoubtedly they also sustained injuries and wounds from combats with each other and from divers accidents. It may be assumed further that these injuries, fractures, etc., were frequently infected with the rich flora of pathogenic opportunists—the staphylococci, streptococci, pneumococci and colon bacilli—that inhabited their bodies as they do our own today, although probably their infections were less frequent and of less virulence because of their wild, free existence. Furthermore, it is known not only *a priori* but from much direct and indirect evidence, that the degenerative and old age diseases afflicted the native Indians essentially as they did the whites and blacks. These diseases include several varieties of arthritis, arteriosclerosis, tumors, nutritional disturbances such as scurvy, rickets, caries, and varying degrees of starvation and deformities.

Throughout this long period of about 20,000 years, the Indians naturally acquired knowledge of the methods and means to protect themselves against their enemies and their diseases. In this they were resourceful and at times exhibited many clever practices, some of which later even won the admiration of the whites.

During these centuries the Indians developed a large and varied *materia medica*; some became expert as herbalists with an almost uncanny knowledge of plants and drugs. Many became proficient in the art of surgery. Others were highly specialized in what today is called physical medicine: hot and cold baths, applications, plasters, splints, mechanical devices of sundry kinds, etc. In many inscrutable ways they became so resourceful in the use of spirits, demons, quackery and rackets, as to put to shame our modern horde of cults, quacks and crooks. It should be emphasized that all these practices indicate that they had suffered from disease for a very long period of time, since such proficiency and so many clever devices could not have been acquired in a day.

The early white men often were so astonished at these medical practices and exhibitions that they proceeded at once not only to learn about them but to apply them. It has been said that in some regions, for a century it was “nip and tuck” between the Indians and these early whites as to which

had the superior system of medicine. With some exceptions, both seemed to have taken a candid view of the matter. The natives from the beginning had confidence and faith in the white man's medicine, at least until the near approach of death. Likewise, the whites early respected the Indian's medicines, which respect, strange to say, has continued to the present time as witness the credulous crowds that assemble about any quack today who offers for sale Indian medicines "guaranteed" to cure all sufferers. Some exceptions should be noted; for example, the French and Iroquois were such bitter military enemies that one had no faith whatsoever in the medical practices of the other.

Many early European explorers were interested in the indigenous diseases in America, primarily for the purpose of finding new treatments and cures for their own afflictions. This led them to observe and study more intensively the Indian diseases in order better to recognize and diagnose diseases in general. It should be pointed out that at this period, differentiation of disease by the Europeans themselves was very primitive and at times not greatly superior to the diagnoses made by the Indian medicine men. Also, at that time the main emphasis was placed on therapy rather than diagnosis.

Physicians in that early period were not numerous; they were not given to long or very accurate accounts of their experiences. When more complete reports appeared many years later, the exotic diseases from Europe had infiltrated the continent, making it difficult to differentiate between the foreign and the original indigenous afflictions.

Paleopathology has been able to contribute important data that concern at least some of these ancient native diseases. The comprehensive work of Moodie<sup>5</sup> devotes a chapter to "Disease Among the Pre-Columbian Indians of North America." Most of his paper is devoted to a lengthy catalogue of skeletal lesions together with references to the literature. Many traumatic conditions are listed: skull fracture, arrowpoint wounds, and fractures of clavicle, arms, femur and hip. Among systemic diseases he mentioned exostoses, periostitis, the arthritides, caries, and doubtful syphilitic lesions. Arthritis deformans and osteoarthritis of several bones were included, and tumors were noted but were rarely found. The Indian's knowledge of surgery was primitive, and major surgery was unknown. The use of ligatures, bloodletting, excisions by flint instruments, abscess drainage, removal of small tumors, cleverly devised splints for fixation and protection, crutches, bandages for fractures and chest fixation, were known but practiced only by certain tribes. Major amputations were probably not done, and the use of crude anesthesia was limited to a few surgical dislocations and fractures.

<sup>5</sup> Moodie, R. L.: *Paleopathology*. University of Illinois Press. Urbana, Illinois. 1923.



Probably the most authoritative as well as the most detailed paper so far written was by Hrdlicka,<sup>6</sup> the wellknown anthropologist who for many years made general observations on the American Indians, giving special attention to their diseases. His sources of information were especially significant and comprehensive, since he mentioned records of friars and missionaries, early chroniclers—Gomara, Herrera, Diaz, Sahagun and Oviedo, the “Jesuit Relations,” and records of Moravian and other religious orders. He also used notes of early travelers and U.S. Army surgeons who early came into contact with the aborigines; letters and collected reports made by writers, including Kober and his colleagues; special observations by Reservation physicians and such observers as Schoolcraft, Mrs. Stevenson and Mathews. Very important were the skeleton collections at the U.S. National Museum, the U.S. Army Museum, the San Diego Museum and the Lima (Peru) Museum.

Hrdlicka stated that before Columbus, the Americas were perhaps the most healthful of all continents; there was no evidence of areas that had been depopulated by disease. Early white explorers and settlers observed no epidemics of pure American origin. The bones of Indians were relatively free from evidence of infectious diseases, nor was there evidence or reports of tuberculosis, plague, cholera, typhus, smallpox, measles or leprosy. Diseases of the skin were uncommon, as were mental disorders and cancer. On the positive side, there were indigenous digestive disorders both in the young and the aged. There were pneumonia, arthritis, verruca peruviana and “uta” of the Andes. There was no clear evidence of syphilis. An added argument against syphilis was the high susceptibility of the Indian when later infected with this disease by the Europeans. This same argument also applies to tuberculosis, measles, smallpox, malaria, typhoid and yellow fever, all of which proved deadly to the Indians when later imported from Europe. No doubt the Negro slaves, even from the time of the second voyage of Columbus, carried with them fevers from the unhealthy coasts of Africa. Large numbers of slaves early in the 16th century (1501) were shipped not only to the West Indies but to many other points in the Americas. Thus the positive position of Hrdlicka regarding the absence of indigenous contagious and epidemic diseases in the Americas seems amply justified by his convincing analysis of the evidence available at the time.

Another important contribution in this connection is Benjamin Rush’s “Medical Inquiries on Diseases Among American Indians,” in which he raised the important question of how the indigenous diseases can be separated from the exotic. He called dysentery an Indian disease, as other earlier observers had done. The term was applied to practically all cases

<sup>6</sup> Hrdlicka, Alex.: Disease, medicine and surgery among American aborigines, *J.A.M.A.* 99: 1661, 1932.

of bloody bowel discharges and should not be identified closely with our modern disease. Much of it came from drinking alkali and impure waters. On the other hand, Rush considered smallpox and venereal diseases as exotic in origin. He stated that scurvy was not an Indian disease and that gout was rarely seen, though he believed it existed. He stated definitely that Indians had no "worm diseases," a significant statement since he was an early important writer on helminthology. Rush further noted that diseases of the teeth were rare—another statement of importance since he early interested himself in these diseases. He named in summary only fevers, old age, war and casualties as important afflictions of the Indians. He made no reference whatsoever to the existence of indigenous epidemic disease among the Indians.

Medicine among the American Indians is set forth in compact form by Stone.<sup>7</sup> He stated that tuberculosis, syphilis, gonorrhea, puerperal sepsis and eclampsia were unknown. Digestive disturbances were common, due to their manner of eating, their periodic fasts and semistarvation. Rickets was fairly common in some tribes. In certain areas goiter and urinary calculi were common. Tumors were rare because there were relatively few old people. From excessive exposure, rheumatic and neuralgic diseases were frequent, and in the Great Lakes region pleurisy and bronchial disease prevailed. Conjunctival troubles were rampant due to living in smoke filled huts and tents. Wounds, fractures and dislocations were common because of the Indian's life of warfare and exposure. He made no reference to epidemic or contagious disease among the primitive peoples in the early times, as contrasted with the prevalence of such diseases in the Indians of later and today.

#### MEDICAL REGIONALISM IN ILLINOIS

Medical regionalism refers to a limited territory, large or small, within which occur various disease phenomena differing more or less from those observed in adjacent territories.

In his comprehensive studies Drake<sup>8</sup> was the first writer in this country to emphasize the concept which may be described as medical regionalism. He began these studies locally in and about Cincinnati in 1822 and continued to expand them for over 30 years. They were made largely by first-hand observations upon the location and distribution of diseases at a time when the country had not been greatly altered by the advancement of the white man's civilization. Drake's descriptions concern certain regions, beginning in the deep South, extending north through the Mississippi Valley to the Great Lakes and beyond to the Hudson Bay regions.

<sup>7</sup> Stone, Eric: *Medicine Among the American Indians*, N. Y., P. B. Hoeber, Inc., 1932.

<sup>8</sup> Drake, Daniel: see reference 1 in Chap. I.

## SPECIFIC REGIONAL DISEASES

Data are sparse on regionalism for the period before the white man came to the Illini country. Goiter is known to have occurred not uncommonly among both Indians and animals. Asthma was common in Indians, suggesting allergies, since ragweed and many other sensitizing pollen plants are indigenous. It may be assumed also that Indians were afflicted by poisonous snakes and plants (poison ivy and white snake root) in various parts of the primitive country. With the advent of Europeans in the 18th century, many factors, both physical and social, began to change. Forests were cut for houses and timber; trees, shrubs and brush were cleared so that land could be cultivated, and many new farm and garden crops were introduced generally. Exotic domestic animals were brought in; indigenous animals were hunted and some were exterminated. As time went on, such changes and practices tended to produce striking effects on both physical and social factors. Largely through drainage and cultivation of land, modifications occurred in soil, streams, rivers, swamps, lakes, forests and prairies. Other factors responded in one way or another. Weeds, as well as many domestic plants, came with civilization. Exotic insects (probably foreign mosquitoes) of various kinds were introduced, while in some areas indigenous ones were eradicated.

The several diseases in Illinois that follow a regional pattern may for simplicity be grouped according to the nature of the most basic factors responsible for this distribution:

## Infectious diseases:

Malaria

Yellow fever

Trachoma

Infectious diseases generally: poliomyelitis, encephalitis, etc.

## Intoxications

Milk sickness (white snake root)

Poison ivy, and related varieties

Pollens: ragweeds and other sensitizing plants

Poisonous snakes: rattlers, moccasin, coral

## Geochemical diseases

Goiter (iodine deficiency)

Fluorosis (fluorine imbalance)

Due to other trace elements

***Infectious Diseases.***—*Malaria*: Our earliest acquaintance with malaria clearly indicates its tendency to follow a regional distribution. In ancient countries this fact was noted and some of the causal factors concerned were recognized, such as relation to lowlands, highlands, swamps, the sea, the mountains, forests, and animal and plant life. Students of geographic pathology, notably Hippocrates, Celsus, Strabo, Lucretius and, in modern







times, J. P. Frank, Finke<sup>9</sup>, Drake, A. Hirsch and A. F. Hecker, appreciated the physiographic influences. It is now known that this disease spreads easily and quickly wherever *Anopheles* mosquitoes live and where human hosts infected with the parasite prevail.

It is believed that malaria first came to the Americas from Europe and Africa in the year 1501 with the Spaniards and their slaves. Considering their prevalence, the earlier cases probably came with the sailors on the second voyage of Columbus. The slaves, transported from the slave markets in Spain in 1501 to Santo Domingo, could hardly have avoided carrying it for it is well known that malaria existed widely in Spain at that time. With the wide dispersion of infected whites and Negroes in an *Anopheles* environment, both continents in time became infected. The expeditions of Ponce de Leon, de Narvaez, de Soto and Coronado with their white, black and red cohorts were well designed to dissipate malaria throughout a large part of southern North America in the early 1500's.

More is known about the distribution of malaria in later times. Early French explorers, arriving in the more northerly regions, no doubt were infected to some degree with this disease, since France and adjacent countries in Europe had for centuries been active reservoirs. But those northern areas were seemingly unfavorable for malarial propagation since the disease continued to be uncommon for many years. In the latter part of the 1700's when the English conquered and settled much of the country the disease came into its own, and during the next century the Illinois country became a veritable incubator for the malarial parasite, making this disease Enemy Number One.

Regional foci were evident within Illinois from the beginning. Small or large areas became well known to the French inhabitants as *ague* centers. In general, these areas included the bottom lands, swamps, lakes, ponds, territories in the vicinity of water courses, etc., the existence of which conformed to well known facts of malarial life. These were also recognized by later pioneers as disease-breeding regions, and several travelers and explorers, notably Schoolcraft, wrote of their experiences, covering the sufferings of the early settlers in Illinois from malaria and other infections. Drake was the first physician of note to write of the many afflictions in Illinois; his work was first hand and was the first example of systematic medical and health field work done in the Illini country.

In his monograph<sup>10</sup> on malaria in the upper Mississippi Valley, Ackerknecht designated on a map of Illinois the malarial places and regions noted by Drake in 1850 (Fig. 1). This map strikingly illustrates the low

<sup>9</sup> Rosen, George; L. L. Finke, *Bull. Hist. Med.* 20:527, 1946.

<sup>10</sup> Ackerknecht, E. H.: Malaria in the Upper Mississippi Valley, *Bull. Hist. Med. Supplement* No. 4, 1945.)



and wet bottom lands adjacent to rivers as, par excellence, the malarial areas. The distribution was general, however, although frequently respecting the more elevated regions. Ackerknecht analyzed fully the effects of malaria upon the pioneers, settlements, location of cities and towns, roads, drainage, land cultivation, mosquitoes, and animal and plant life.

*Yellow Fever:* This disease came to the Americas about the beginning of the 16th century, probably from Africa. Evidently the slave trade was largely responsible. From the West Indies it invaded both continents. From time to time it spearheaded from the Gulf of Mexico region to North America along three main routes: the Atlantic seaboard, the Mississippi River, and a western prong from Mexico to the north. Comparable to malaria, a mosquito and a non-immune host are requisites for its migratory distribution. The ecology of the *Aedes* mosquito determined these courses.

Twice yellow fever invaded Illinois, first in 1878 and again in 1897. Both years were hot and dry and had late summers. The first invasion followed the Mississippi River and reached Cairo, Illinois, by way of Hickman, Kentucky. It prevailed there during August, September and October, and was checked only by the first frost. There were 80 cases and 62 deaths. On September 19 and 20, 1897, four cases again appeared in Cairo, and the diagnosis was confirmed by Dr. Guiteras of the Marine Hospital Service. The Illinois outbreak was of short duration, but it was serious that year in New Orleans, Mobile and Atlanta.

The Illini country, therefore, was just at the northern tip of the lower Mississippi Valley region that was invaded by yellow fever from the West Indies so many times and with such dire results. All danger of invasion by this disease was removed by its eradication from the West Indies soon after the close of the Spanish-American War.

*Trachoma* has been a pestilence of no little importance in Illinois for more than a century. There are practically no Indians in the state now and there is no evidence to indicate that the primitive Indians were afflicted. Since Negroes are relatively resistant to this disease, the infection is limited to the white population.

Long ago it was noted that the southern and southeastern counties had the highest incidence of trachoma. Ashburn<sup>11</sup> thought that it was brought over to the Western Hemisphere from Spain and later from other Mediterranean countries, especially Egypt. Often it was associated with other eye infections, making the diagnosis difficult and confused.

Little is known about trachoma in Illinois during the pioneer period. Rawlings<sup>1</sup> and Zeuch<sup>12</sup> barely mentioned it, although ophthalmias were

<sup>11</sup> Ashburn, P. M.: *The Ranks of Death*, 1947, Howard-McCann, New York.

<sup>12</sup> Zeuch, Lucius H.: *The History of Medical Practice in Illinois*, Vol. I. The Book Press Inc., Chicago, 1927.

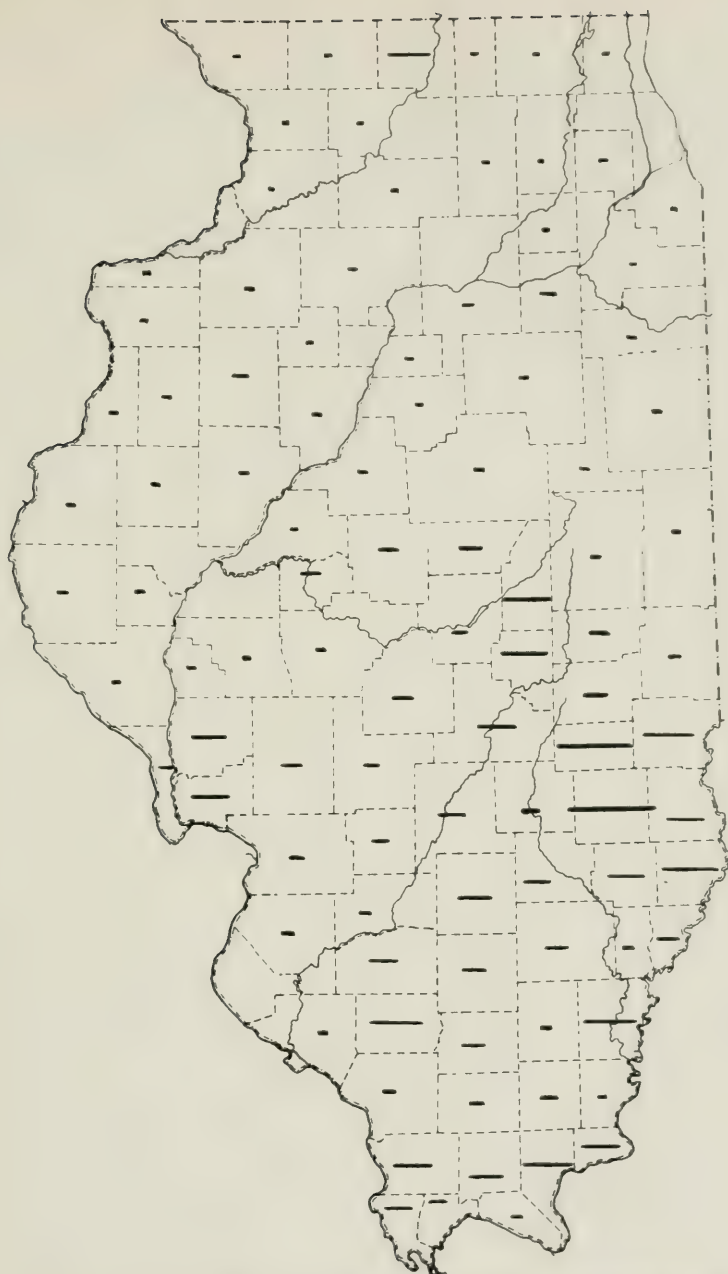


FIG. 2. A map of Illinois showing the relative percentage of trachoma in each county, based upon the number of cases sent to the Illinois Charitable Eye and Ear Infirmary from 1890 to 1900 and the census returns of each county in 1900.





referred to as early common diseases. Interest in trachoma began during the latter part of the 1800's when it became possible more clearly to differentiate the several eye infections. Apparently, like other infectious diseases, it was introduced and spread by the early settlers, chiefly into the southern regions of the state where it continued to exist and also evidently to increase for many years. By the latter part of the 19th century, it became such a serious problem that special studies and surveys were instituted. Fortunately the Charitable Illinois Eye and Ear Infirmary had been established in Chicago in 1858 to which these eye cases could be referred for treatment. Thus over a period of years data became available for comparative studies.

For the period 1880 to 1900, Brown<sup>13</sup> made a tabular study of trachoma as it then existed in all the counties in the state, based upon data collected at the Infirmary during this period (Fig. 2). Several thousand cases were reported during this 20-year period; only three counties had sent in none, and these were not adjacent. Analysis of the map reveals a definite regional distribution, the majority of cases coming from the southern and south-eastern counties. A region along the Wabash River and between the Wabash and Little Wabash Rivers was heavily infested. The counties of Jasper, Cumberland, Lawrence, White, Crawford, Pope and Clark stand out notably. Secondary regional foci are Perry, Shelby and Jersey in the central and western part, and Winnebago County far removed from all other centers in the northern tier of counties.

In general, the obliquely running Illinois River primarily marks the upper margin of the trachoma region in this state. The three trachoma counties that are outside this region—Winnebago, Knox and Calhoun—do not rank high in incidence. However, the Illinois region of trachoma extends rather widely into some of the adjacent states so that the problem is a larger one than is indicated by the data from Illinois only.

With the introduction of the causative agent into this region a century or more ago, trachoma found conditions favorable not only for gaining a firm foothold but also for its continued progress. The existence of a relatively low state of sanitation and poverty in widely scattered areas would seem to be one of the important endemic factors. Early recognition of a regional distribution has been and will continue to be of assistance in the control and final eradication of the disease. With the more modern treatment and management of the disease since the beginning of the 20th century, the infection began to recede and in time will undoubtedly cease to be the pestilence it was for so many years.

**Intoxications.** *Milk Sickness:* A large region in eastern and central United States comprising at least 11 states (Ohio, Indiana, Illinois, Iowa,

<sup>13</sup> Brown, E.V.L.: 1900. *Illinois Eye & Ear Infirmary Report*.

Michigan, Kentucky, North Carolina, Virginia, Georgia, Alabama, Mississippi) has revealed a striking primary regionalism for milk sickness. This area has furnished nearly all the cases of milk sickness in the United States for over a century, having been observed as early as the American Revolution. Much attention was given to the disease by the pioneers since it afflicted livestock as well as man; even certain birds were susceptible. During the 19th century the disease was recognized as probably being due to poisoning of animals by the consumption of certain plants, mainly white snake root.<sup>14</sup> This plant reveals a definite local regional preference in the states mentioned above. In late summer it grows well in shady places, especially in dry years, and in waste and pasture lands, near streams and in fence corners. It reaches 1 to 4 feet in height, with white corym-like blossoms appearing in August and September. Cattle eat the plant during dry hot days in the fall when other feed is short. Tremetol then appears in the milk, although it is also generally distributed in the tissues.

Milk sickness has a definite symptomatology but in the early years it was confused with malaria, arsenic poisoning, typhus and other fevers. In certain outbreaks the mortality has been as high as 25 per cent. It was greatly feared and, therefore, played a part in retarding early settlements. There is no known immunity to the disease. With drainage and cultivation of the land, the plant was greatly restricted in its distribution.<sup>15</sup>

Regionally, Illinois occupied a position in the northwest corner or segment of the larger area of states in which milk sickness occurred. Within the large primary region, a secondary regionalism is clearly evident in the definitely local areas in which the specific *Eupatorium* flourishes. (See Zeuch, Vol. I, pp. 77 and 349 for further details on distribution.)

**Geochemical Diseases.** From the beginning of our knowledge of *goiter*, regionalism has been a recognized principle. While it is essentially a global disease, its distribution on the various continents is delimited to fairly definite areas. Certain mountainous regions, valleys, interior hilly and lake countries early became known as goiterous while other areas, especially coastal and island territories, were recognized as relatively free from the disease.

<sup>14</sup> A Dr. Rowe in 1838 asserted the cause was poisoning by the white snake root though this was denied by many observers, Drake for instance. More recent experimental studies confirmed Rowe's conclusion. In 1917, J. F. Couch of the Bureau of Animal Industry isolated tremetol ( $C_{10}H_{22}O_8$ ) from white snake root (*Eupatorium ageratioides*) which reproduced the symptomatology in animals. (His papers are published in the *J. Agr. Research*, *J. Am. Chem. Soc.*, *J.A.M.A.* of the years 1927, 1928, 1929.) Clay of Hoopeston, Illinois (published in Tice's *System of Medicine* 8:123, 1925) also confirmed Rowe's opinion by feeding experiments.

<sup>15</sup> At the present time the disease is rarely encountered, and most living physicians have never seen a case. The disease has been made known to many people through the recorded experience of the Lincoln family in Spencer County, Indiana, and Nancy Hanks, Lincoln's mother, died of it.

Chatin, in 1850, demonstrated that there was a definite relationship between such goiter regions and an inadequate amount of iodine in the soil for the normal physiology of the body.<sup>16</sup> Later it was shown that this was also true not only for humans but for many lower animals, including fish. This fact and later discoveries furnished a chemical basis for the function of the thyroid gland. It also explained satisfactorily the regional distribution of goiter areas, since these were found to be deficient in iodine—the element essential for the proper functioning of this gland.

A century or more ago, the Illini country was recognized as a goiter region from the relatively common occurrence of "enlarged necks," both in early settlers and in the indigenous natives. Marine<sup>17</sup>, in 1905, extended the problem to include lower animals and fish, making it possible thereby to investigate goiter experimentally. By observation and controlled methods it was soon found that the goiter area in the central west covered a relatively large territory adjacent to the Great Lakes, especially in Illinois, Indiana, Ohio and Michigan.

Within the last generation much has been accomplished in a preventive way throughout goiter regions by an adequate control of the individual intake of iodine by the general use of iodized salt in the diet. A careful study of regionalism in this disease together with other related observations has furnished a striking example of the significance of this factor in medicine.

*Fluorosis:* A few reports, remote in time and place, certify that certain peoples have been known to have had blackened or dark teeth. Such regions were located about the Mediterranean Sea or near volcanoes. During the past century it was observed that in certain definite localities in this and other continents, the teeth of many inhabitants acquired a dark brownish mottling associated with lamination. Later it was noted that such discolored teeth, especially in children, were resistant to caries. Within recent years the condition has become a well recognized regional disease.

More careful observations revealed that the condition was associated with and dependent upon the metabolism in the body of fluorine and its compounds. The term fluorosis was applied to the disease, a term which now has come into general use in both medicine and dentistry. Then two additional basic facts were discovered: first, that limited territories throughout the world revealed relatively excessive amounts of fluorine in the water, soil and foods, whereas other regions were relatively deficient in this element; second, that "the mottled enamel" regions corresponded closely with those containing the relatively large amounts of fluorine.

As observations proceeded, it became necessary to develop chemical

<sup>16</sup> Krumbhaar, E. B.: *Pathology*, N. Y., P. B. Hoeber, Inc., 1937.

<sup>17</sup> Marine, D.: Further Observations and Experiments on Goiter in Brook Trout, *J. Exper. Med.* 19:70, 1914.



technics especially designed for the accurate determinations of fluorine compounds found in nature. This was successfully concluded and furnished a quantitative chemical basis for the problem. It was discovered that for practical purposes a limit of 1 part per million of fluorine in water was adequate for the normal body and that amounts very much in excess of this might result in undesirable discoloration of the teeth. On the other hand, amounts much less than this would definitely predispose to caries.

In Illinois it was found that a limited territory in the northwest and central parts of the state yielded water with a relatively high fluoride content (Fig. 3).<sup>18</sup> Thus, by localizing the regions of excess and deficiency of fluorides in a state, it is possible to take measures to correct or to adjust a lack of balance of this important element to a value within the range of normal physiologic variations for the human body. In many communities the control of the fluoride content of the waters is rapidly becoming a routine practical problem, the objective being to provide children with fluorine adequate to protect against caries on the one hand and to avoid mottling the enamel on the other.

It has long been known that constituents of the soil and water other than iodine and fluorine at times and in certain regions have astonishing effects upon the welfare of living things. Evidence has been accumulating now for some years which reveals that zinc, arsenic, molybdenum, cobalt, copper and some others in minute amounts (of the order of 1 part per million, etc.) have a profound effect in a variety of ways upon both animals and plants. Their wellbeing, health, growth and even their continued existence may depend upon the presence or absence of such elements in minute amounts. "*Trace elements*" is the term now commonly applied to them.<sup>19</sup>

#### RÉSUMÉ

Thus, the regional diseases in Illinois include some of the more important maladies that occur in Illinois. Others might be given. As a matter of fact, nearly all diseases, whether infectious or non-infectious in nature, may be approached from this standpoint, and often with profit. On analysis, practically all of them, from time to time, will reveal interesting variations in distribution. Some of these variations are accidental in character, and why many of the variations are regional is not now known.

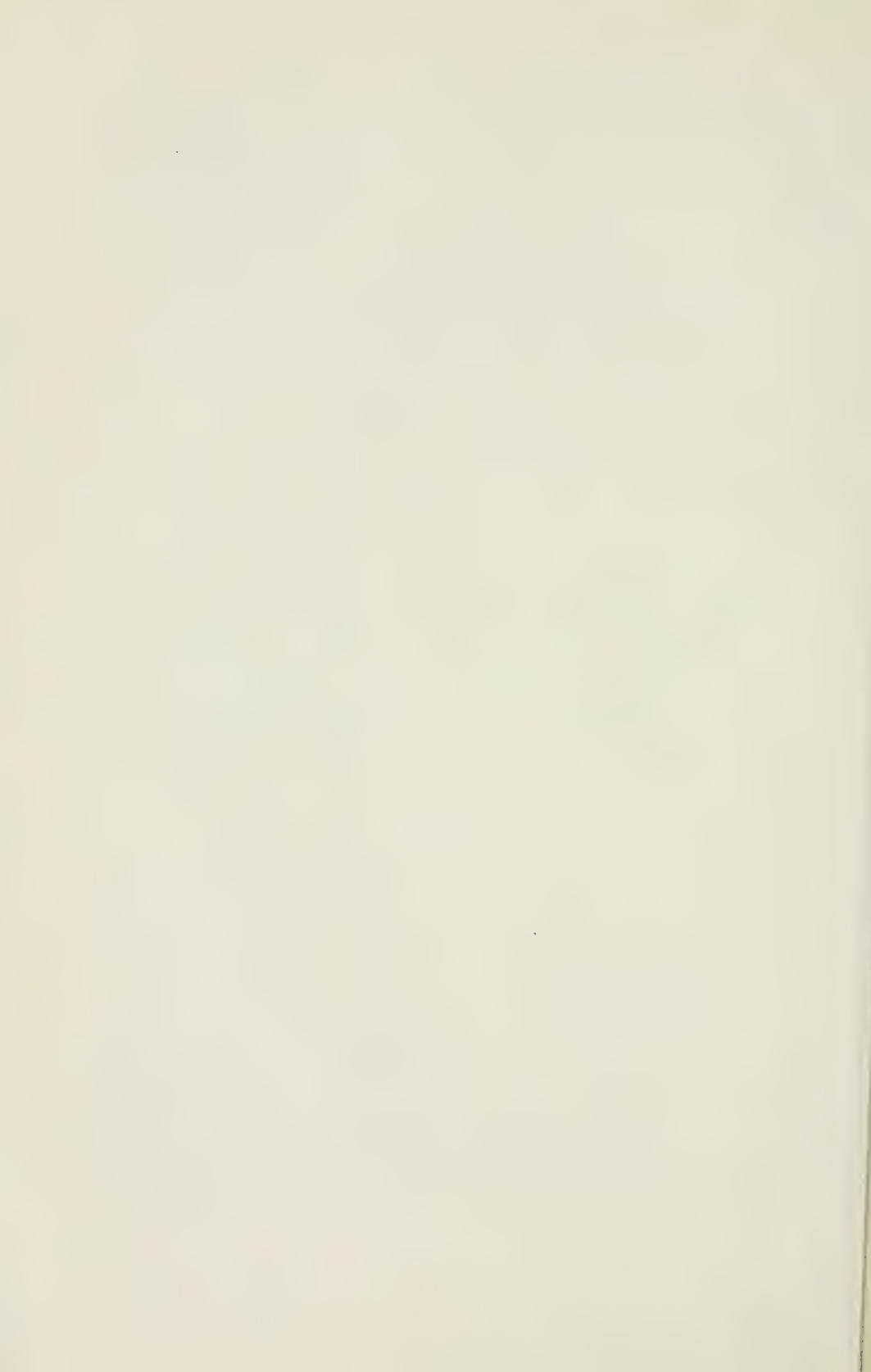
Collection and analysis of medical data from the point of view of regionalism are useful and valuable approaches in any long range historical study of disease in a given territory. Naturally such studies are based

<sup>18</sup> Deatherage, C. D., Klassen, C. W., and Weart, J. G.: Fluorides and mottled enamel in Illinois. *Ill. Dent. J.* 8:124-205, 1939; from the Ill. Dept. Public Health.

<sup>19</sup> For a concise paper on this interesting subject, the reader is referred to the *Scientific Monthly*, 1954, June, p. 339, where Dr. H. V. Warren discusses "Geology and Health" in a comprehensive manner, including the trace elements.



FIG. 3. A map of Illinois showing the public water supplies in the state with a fluorine content of 0.9 p.p.m. or more.





largely on more or less routine data now accumulating in most health and medical institutions. Chief emphasis should be placed upon basic studies of physical and social factors in order to understand the fundamental principles of health and disease. The approach to such studies is both preventive and practical, depending upon the nature of the problem.

CHAPTER III

THE HARDY PIONEER:  
HOW HE LIVED  
IN THE EARLY MIDDLE WEST\*

BY PAUL M. ANGLE, PH.D.†

**B**Y the time the pioneer came to write his reminiscences, either for private publication, or for the county history, or for the Old Settlers' Society, the hardships of the past had faded into insignificance before the conviction that it had been a good life. And on the whole, it had been a healthy life. When one old settler contended that "the youngsters presented masterly models of symmetry and beauty," and that "the beauty and brilliancy of human excellence, the comeliness of the figures of the early pioneers of Illinois" defied description,<sup>1</sup> he was speaking more fulsomely than most of his contemporaries; but many of them would have agreed with another who wrote: "Living in log houses, generally unplastered, with open fireplaces, they breathed pure air, and having regular sleep, and dressing healthfully, they were afflicted with but few physical ailments, save malarial ones."<sup>2</sup>

The fact is that the pioneer was afflicted by a great many physical ail-

\* Pertinent excerpts are herewith selected from the lecture by this title delivered on March 30, 1949, which was the sixth in a series given at the University of Illinois College of Medicine, Chicago, under the auspices of the D. J. Davis Endowed Lectureship on Medical History.

† Dr. Angle, now Director of the Chicago Historical Library, was for many years Director of the Illinois State Historical Library at Springfield, Illinois. He is the author of many books and papers on the early history of Illinois. Since Dr. Angle is a professional historian and not a physician, the abundant data at his disposal have been presented from the point of view of the "hardy pioneer" and not from that of the doctor. The period covered in this chapter begins approximately in 1820, when the pioneers were invading the southern and central areas of the state, and extends well into the period past 1850, when the northern areas were occupied, thus connecting the intervals of time covered by Volume I and Volume II of this series. While Zeuch in Volume I presented much early pioneer data, later historical studies have made it possible for Dr. Angle to record more fully and completely the medical experiences of the Illinois pioneers. He has also made it clear that the best and most lucid accounts of malaria, as well as of other diseases, have been given not by doctors but by their suffering patients.—*Editor*

<sup>1</sup> John Reynolds, "Cotton Picking," in *History of Sangamon County* (Springfield, Ill., 1881), 172.

<sup>2</sup> M. G. Wadsworth, "Auburn and Vicinity Forty Years Ago," *Ibid.*, 178

ments, and that the malarial exception was much more important than an unwary reader might assume from this statement.

There are no statistics available, but contemporary evidence establishes the prevalence of illness beyond question. Thus James Flint, an Englishman traveling in the Ohio Valley, reported from Louisville in the fall of 1820 that one-third of the inhabitants of Vincennes were confined to their beds, and that the same was true of the Wabash country on both sides of the river.<sup>3</sup>

In its issue of December 19, 1820, the *Edwardsville Spectator* (Illinois) apologized for bringing out only a half sheet on the ground that its staff had been disabled by the influenza. Around Indianapolis, in the summer and fall of 1821, fevers of one kind and another were so prevalent that it was estimated that an eighth of the population had died. Six months later the *Indianapolis Gazette* asserted that 900 of the 1000 inhabitants of the town either were or had been sick. In the fall of 1823 Ohio newspapers reported that more than half of the 165,000 people who lived within fifty miles of Columbus were ill. The Asiatic cholera, brought to the West<sup>4</sup> in 1832 by regular army troops sent out to participate in the Black Hawk War, took hundreds if not thousands of lives during the next three years. The milk sickness claimed many a victim in addition to Nancy Hanks Lincoln. Pneumonia, typhoid, erysipelas, and other ailments kept the pioneer company wherever he went.<sup>5</sup>

No disease, however, approached the fever and ague in universality. So certain was its incidence, so prevalent its ravages, that the early settler soon came to consider it a concomitant of the frontier, and dismissed it with the grimly nonchalant remark, "He ain't sick, he's only got the ager."

But the shaking wretch who was in the grip of the disease was sick, and knew it. As one old pioneer put it, the chills crept over your system in streaks, "faster and faster, and grew colder and colder as in successive undulations they coursed down your back, till you felt like 'a harp of a thousand strings', played upon by the icy fingers of old Hiems (Hermes?) who increased the cold chills until his victim shook like an aspen leaf, and his teeth chattered in his jaws. There you laid shaking in the frigid ague region for an hour or so until you gradually stole back to a temperate zone. Then commenced the warm flashes over your system, which increased with heat as the former did with cold until you reached the torrid region, where

<sup>3</sup> *Letters from America*, in Reuben Gold Thwaites, *Early Western Travels* (Cleveland, 1904), IX, 287.

<sup>4</sup> Here and throughout this paper this term is given the meaning it had one hundred and more years ago: that is, as being roughly synonymous with the present Middle West.

<sup>5</sup> This paragraph is based upon the comprehensive, well documented summary to be found in Madge E. Pickard and R. Carlyle Buley, *The Midwest Pioneer: His Ills, Cures, & Doctors* (New York, 1946, 11-27.)



you lay in burning heat, racked with pain in your head and along your back, for an hour or so, when you began by degrees to feel less heat and pain, until your hands grew moist, and you were relieved by a copious perspiration all over your body, and you got to your natural feeling again.”<sup>6</sup>

“You felt as though you had gone through some sort of collision, thrashing-machine, or jarring-machine, and came out not killed, but next thing to it,” another description runs. “You felt weak, as though you had run too far after something, and then didn’t catch it. You felt languid, stupid and sore, and was down in the mouth and heel and partially raveled out. Your back was out of fix, your head ached and your appetite crazy. Your eyes had too much white in them, and your whole body and soul were entirely woe-begone, disconsolate, sad, poor, and good for nothing. You didn’t think too much of your-self and didn’t believe that other people did, either; and you didn’t care. You didn’t quite make up your mind to commit suicide, but sometimes wished some accident would happen to knock either the malady or yourself out of existence. You imagined that even the dogs looked at you with a kind of self-complacency. You thought the sun had a kind of sickly shine about it. About this time you came to the conclusion that you would not accept the whole state of Indiana as a gift; and if you had the strength and means, you picked up Hannah and the baby, and your traps, and went back ‘yander’ to ‘Old Virginny,’ the ‘Jerseys,’ Maryland or ‘Pennsylvania.’”<sup>7</sup>

So harrowing was the ague that it gave rise to many of the tall tales in which frontier America delighted. More often than not the stories concerned the sufferings of those who lived in the valley of the Illinois River—the worst place, by general repute, in the entire West. One settler there shook all the teeth from his head; another could never keep a garment whole because his constant shaking unravelled it thread by thread until it fell apart; the fits of a third became so frequent and so violent that his house fell down around him and he was buried in its ruins.<sup>8</sup>

In this paper I propose to sketch those aspects of the pioneer’s environment and habits of life that made the ague, and the other ailments with which he was afflicted, inevitable. First, however, we need to determine what we mean by the pioneer and the pioneer period.

Obviously, the pioneer period was of uneven duration. In parts of Ohio, for example, it could be said to have lasted for a generation. In southern Wisconsin, on the other hand, it was of half that length. Moreover, taking

<sup>6</sup> *A. D. P. Van Buren in Michigan Pioneer Collections, V (1882), 300-01.*

<sup>7</sup> Pickard and Buley, *The Midwest Pioneer*, 17.

<sup>8</sup> J. S. Buckingham, *The Eastern and Western States of America* (London, 1842), II, 272-73.

an area as large as the Old Northwest, the pioneer period was a thing of the past in certain regions before it had even begun in others. Ohio, admitted to the Union in 1803, had a population of 1,500,000 by 1840, while in that same year Wisconsin, whose territorial organization was only four years old, counted 30,000 inhabitants, living for the most part in the southernmost quarter of the territory.

In 1839 J. Gould, a Massachusetts farmer, described Chicago as being surrounded by "a low flat prairie which extends either way about 10 miles," and asserted that "in wet seasons the roads in the vicinity are almost impassable."<sup>9</sup>

The early settler, his doctor, and the traveler all knew that wherever stagnant water was to be found the ague would also be encountered. Low ground near rivers and creeks gave out "putrid exhalations."<sup>10</sup> Swamps, which only partially dried up in the summer, filled the air with "noxious effluvia."<sup>11</sup> According to James Flint, the "gaseous constituents" which evolved from rapidly decomposing vegetable matter "give a perceptible taint to the air, and are understood to form the miasmata that occasion agues, bilious fevers, and liver complaints."<sup>12</sup> Edmund T. Flagg was equally positive. "A soil of such astonishing depth and fertility," he wrote in *The Far West*,<sup>13</sup> veiled from the purifying influences of the sun by the rank luxuriance of its vegetation, in the stifling sultriness of midsummer sends forth vast quantities of mephitic vapour fatal to life; while the decay of the enormous vegetables poisons the atmosphere with putrid exhalations."

As late as the 1880's there were old settlers who attributed their bouts with the shakes to these same intermediary agents. "Miasma," one confidently asserted, "had caused the trouble." Another wrote: "The earliest pioneer found Michigan healthy, but later so much ground was ploughed up and the malarial gases set free, that the country became very sickly."<sup>14</sup>

That the evil agent was a winged pest instead of a mephitic vapor, none suspected. Yet the mosquito was present in numbers unimaginable today. William Faux, writing of Birkbeck's English Settlement, said that in the summer and fall of 1818 the mosquitoes were so bad that they almost drove out the settlers.<sup>15</sup> Mrs. Trollope, venturing into the woods adjacent to

<sup>9</sup> "Wanderings in the West in 1839," in *Journal of the Illinois State Historical Society*, December, 1940, 389-411.

<sup>10</sup> David Thomas, *Travels Through the Western Country* (Auburn, N. Y., 1819), 213-18.

<sup>11</sup> Fordham, *Personal Narrative*, 231-32.

<sup>12</sup> *Letters From America*, in *Early Western Travels*, IX, 189.

<sup>13</sup> In *Early Western Travels*, XXVII, 94.

<sup>14</sup> A. D. P. Van Buren in *Michigan Pioneer Collections*, V, 300-01; Ruth Hoppin in *Ibid.*, XXXVIII, 414.

<sup>15</sup> *Memorable Days in America*, in *Early Western Travels*, XI, 247.

Cincinnati in 1828, was driven out by the clouds of mosquitoes that flourished there, although the region had been settled for forty years.<sup>16</sup> In 1840 James S. Buckingham, an English traveler, found the mosquitoes so bad at an inn twelve miles south of Chicago that he made them the subject of one of the most vivid passages in the book he wrote about his American experiences. "The place . . . seemed to be the headquarters of the mosquito tribe," he wrote; "they kept our hands and handkerchiefs in constant motion; and yet they evaded both, so as to cover the faces of most of the parties with large pustules from their bites. They were the largest and most venomous I had ever seen; and the sultriness of the night, the closeness of the place, and the filth of the room in which we were staying, seemed to give them new vigour. I went into the open air, hoping for some relief, but met as large a legion of them without as within, and found there was no escape from their tormenting attacks. One of our Western passengers declared that in a part of the prairie from which he had come, they were so thick that if you held out your naked arm straight for a few minutes, so as to allow them to settle on it, they would be followed by such a cloud of others hovering around them, that if you suddenly drew in your arm, you would perceive a clear hole left in the cloud, by the space which the arm had occupied!"<sup>17</sup> (Even the Englishman recognized this as a tall tale.)

The observations of travelers convince one that the pioneer had no aversion to dirt, either in his surroundings or on his person. Nothing made a deeper impression on William Faux when he visited Indiana and Illinois in 1819 than the widespread disregard of personal cleanliness. "Soap," he wrote, "is no where to be seen in any of the taverns, east or west. Hence dirty hands, heads, and faces every where." Nor was this condition confined to the frequenters of public houses: the settlers themselves had as little as possible to do with soap and water. "The face is seldom shaved, or washed, or the linen changed except on washing days," Faux commented. Moreover, men who had spent their entire lives in communities where cleanliness was demanded quickly slipped into slovenly habits. Faux cited as an example of the "barbarizing" process a Lincolnshire man who had lived in the English Settlement only a year or two. He was living, with his brother, "in a most miserable log cabin, not mudded, having only one room, no furniture of any kind, save a miserable, filthy, ragged bed. . . . Both were more filthy, stinking, ragged, and repelling, than any English stroller or beggar ever seen; garments rotting off, linen unwashed, face unshaven and unwashed, for, I should think, a month."<sup>18</sup> Harriet Martineau, visiting the United States nearly twenty years later and moving in

<sup>16</sup> Frances M. Trollope, *Domestic Manners of the Americans* (London, 1832), I, 133.

<sup>17</sup> *Eastern and Western States*, III, 251-52.

<sup>18</sup> *Memorable Days*, in *Early Western Travels*, XI, 268.



social circles supposedly far superior to the backwoods regions of Indiana and Illinois, observed: "In private houses, baths are a rarity. In steam-boats, the accommodations for washing are limited in the extreme; and in all but first-rate hotels, the philosophy of personal cleanliness is certainly not understood."<sup>19</sup>

Vermin, naturally, were common. Unwashed bodies and heads meant lice; dirty bed linen meant bed bugs. The house fly was a pest second only to the mosquito. In the summer, with doors and windows unprotected by any kind of screening, flies descended on the dining tables in black swarms. James S. Buckingham was not relating an isolated instance when he described his experience at Ottawa, Illinois, in 1840: "When the supper was announced at five o'clock, and we sat down to the dirty and ill-furnished table of the principal inn here, we could not perceive the contents of any single dish on it, from the myriads of flies, which presented only one confused and tremulous mass of black moving matter on the surface; and when these were disturbed by the flyflops and fans set in motion, the noise of their buzzing, and the stings they inflicted on the face and hands where they alighted, was sufficient to destroy all appetite."<sup>20</sup>

At about the same time William Oliver found the pests even thicker in southern Illinois. "The house is no sooner entered," he wrote, "than you hear one continued hum, and the room is almost darkened by myriads of house-flies, which . . . , when there are sick people in bed, require the constant attention of some assistant to drive them off, otherwise, if the patient were a child, or very weak, I believe they would soon suffocate him. Molasses, sugar, preserved fruit, bread, everything on the table, is loaded with them, and the very operation of fanning them off drives numbers of them into the molasses and other things of an adhesive nature. It is not safe to open your mouth. It is evident, too, on examining the molasses, that the small red ant has been purloining it, and has left a number of his unfortunate companions enveloped in its mass; whilst ever and anon a cockroach makes a dash at the table, and in nine cases out of ten, succeeds in scampering across over meat dishes and everything that comes in the way, and that too in spite of the bitter blows aimed at him with knife and spoon, he is 'so t'nation spry.'"<sup>21</sup>

An almost universal practice that also contributed in a way to the prevailing squalor was the chewing of tobacco. Men spit everywhere, in the direction of receptacles if there were any, if not, on the floors and streets. In Cincinnati, even at an evening party, Mrs. Trollope noted: "The gentle-

<sup>19</sup> *Society in America*, III, 151-52.

<sup>20</sup> *Eastern and Western States*, III, 233.

<sup>21</sup> *Eight Months in Illinois with Information to Emigrants* (Newcastle-upon-Tyne, 1843), 77.



men spit, talked of elections and the price of produce, and spit again." <sup>22</sup>

Backwoodsmen, and their contemporaries in the towns and cities, were as fond of their drams as of their quids. "Morning bitters," generally whiskey, were drunk by all members of many families. Whiskey before dinner stimulated the appetite; after eating it aided digestion. Few house-raising, quilting bees, shooting matches, race-meets, or threshings were got through without the help of the jug. When one early settler met another in a backwoods tavern, often as not the rest of the day was spent "in shooting at marks and drinking drams of whiskey." <sup>23</sup> One traveler after another—Faux, Fordham, Latrobe, Buckingham—commented on the fondness of the people for alcoholic liquor and their excessive indulgence in it. <sup>24</sup>

Many observers attributed various ailments to this overindulgence, but few if any went so far as Daniel Drake of Cincinnati, probably the most celebrated physician of the West. Intemperance, Drake believed, caused disorders of the stomach, liver, and lungs, swelling of the feet, sore eyes, epileptic fits, and leprosy. Moreover, there was always the chance of spontaneous combustion. "On this point facts have multiplied," he reported, "until the most incredulous inquirer can scarcely retain his doubts. The bodies of corpulent inebriates, when asleep, have, in several instances, taken fire, by the accidental contact of a burning coal or candle, and all the soft parts have been reduced to ashes, or driven off in clouds of thick smoke. To conceive the possibility of this revolting catastrophe, we need only recollect the combustible nature of fat, and the still more inflammable quality of ardent spirits, which is composed of the very same materials; and which, being swallowed, daily, in excessive quantities, with reduction of food, may be presumed to alter, to a certain degree, the chemical composition of the body. Meanwhile its vital powers become greatly reduced, and thus render it an easier prey to fire or other external agents." <sup>25</sup>

Although leading to no such calamitous end as spontaneous combustion, the eating habits of the Westerner of 125 years ago could not have been without their effect on health. The diet was heavy with meat and bread, the latter in many forms, and usually served hot. Mrs. Trollope was describing many a menu when she wrote of a "tea" at Cincinnati as consisting of "tea, coffee, hot cake and custard, hoe cake, johnny cake, waffle cake, and dodger cake, pickled peaches, and preserved cucumbers, ham, turkey, hung beef, applesauce, and pickled oysters." <sup>26</sup>

<sup>22</sup> *Domestic Manners of the Americans*, I, 83.

<sup>23</sup> Excerpts from the Diary of George Flower, 1816, in *Chicago History*, I, No. 12, 366.

<sup>24</sup> Faux, *Memorable Days*, in *Early Western Travels*, XI, 213; Fordham, *Personal Narrative*, 129, 231; Latrobe, *Rambler in North America*, I, 291; Buckingham, *Eastern and Western States*.

<sup>25</sup> Quoted in Pickard and Buley, *The Midwest Pioneer*, 16.

<sup>26</sup> *Domestic Manners of the Americans*, I, 83.

As far as illness was concerned, water was no less blameworthy than food and the manner of eating it. The presence of a well marked a settler as far more enterprising than most of his fellows. "Americans," wrote Fordham in 1818, "... have such a dread of a little trouble, that they must be near a creek, that they may dip for water at their cabin doors; for wells won't dig themselves, and the swing pole and bucket are for ever out of order."<sup>27</sup> Fifteen years later Patrick Shirreff found a tavern keeper a short distance southwest of Chicago drawing water from a stone-lined well, and was impelled to remark that such a facility was "uncommon in this part of the country, few people taking so much pains to keep their water free of mud."<sup>28</sup>

On the steamboats a bucket lowered over the side supplied water for drinking as well as all other purposes.<sup>29</sup> Eliza Steele, traveling up the Ohio in 1840, cited an amusing example of the way in which habit leads to preference. She hesitated to drink the muddy water in the tumbler, which had half an inch of sediment in the bottom. One of her traveling companions, a native of the country, took a swallow. "Dear me! What insipid water!" she remarked. "It has been standing too long. I like it right thick." Whereupon she sent the chambermaid for some water fresh from the river "with the true Mississippi relish."<sup>30</sup>

The cities, in fact, were as remiss in matters of cleanliness and sanitation generally as the individual settler. Ordinances speak volumes regarding the habits of early residents. In 1827 the city council of Cincinnati prohibited the depositing of mud, dung, or other filth in streets or alleys; or the leaving of dead carcasses of horses, cattle, sheep, hogs, or dogs, or the piling of excrement from vaults or privies within the built-up section of the city.<sup>31</sup> The first ordinances of Chicago, adopted in 1833, included one which made it unlawful for a person "to throw or put, or cause to be thrown or put into the Chicago river, within the limits of said town, any carcass of any dead animal or animals."<sup>32</sup> A Quincy, Illinois, ordinance of 1834 forbade anyone "to bring any dead animal and leave the same to putrify within the limits of the town."<sup>33</sup> Such enactments could be found in almost every town and city of consequence in the West.

Yet there is abundant evidence that these requirements were violated everywhere. When Mrs. Trollope took a house in Cincinnati in 1828 she

<sup>27</sup> *Personal Narrative*, 156.

<sup>28</sup> *Tour Through North America*, 232.

<sup>29</sup> Shirreff, *Tour*, 269; Buckingham, *Eastern and Western States*, III, 88.

<sup>30</sup> *A Summer Journey in the West* (New York, 1841), 210-11.

<sup>31</sup> *An Act Incorporating the City of Cincinnati, and a Digest of the Ordinances of Said City* (Cincinnati, 1835), 110-11.

<sup>32</sup> *Chicago History*, I, No. 8, 224-26.

<sup>33</sup> Henry Asbury, *Reminiscences of Quincy, Illinois* (1882).

was puzzled because there was no pump, cistern, drain, or means of getting rid of refuse. Her landlord told her to pile the garbage in the middle of the street, where the pigs would dispose of it. And they did.<sup>34</sup> In Milwaukee, in spite of ordinances to the contrary, hogs, cattle, and fowl ran at will until the Civil War.<sup>35</sup>

In Springfield the hog controversy went on for two decades while the animals wallowed in the mud holes, disputed the narrow sidewalks with pedestrians, rooted up the boards. Their defenders claimed that they helped to keep the city clean, and that as long as they were allowed to run loose, the poor could raise their own meat. Their opponents claimed that hogs created more nuisances than they removed, that they were often found dead, and that a dead hog never had an owner.<sup>36</sup> So it went, not only in the capital of Illinois, but in many another place as well.

In all probability the hog, imperfect scavenger that he was, served a useful purpose. Even with his services, conditions were bad enough. The city that was built on hilly ground was fortunate, for then the rains washed the streets, though only to deposit movable rubbish, filth, and offal on the first level spot. With this in mind one understands the remark of the traveler, Hulme, in 1819: "I hate the very sight of a level street, unless there be every thing necessary to carry off all filth and water."<sup>37</sup> And one knows what Latrobe meant when he described Chicago in 1833 as "one chaos of mud, rubbish, and confusion."<sup>38</sup>

It would be wrong to assume that every pioneer was as dirty, as intemperate, as gluttonous, and as ignorant as the descriptions cited might indicate. There were many early settlers to whom none of these characteristics could have been applied. Nevertheless, one cannot immerse himself for long in the literature of the time without concluding that at least the generalizations of observers were sound.

It would be wrong, also, to assume that there was no improvement during the pioneer period. However, even as the mid-century mark approached, conditions in the Middle West left much to be desired. That we know from the remarkably thorough survey of the region made by Dr. Daniel Drake in the late forties, and published in 1850 under the forbidding title, *A Systematic Treatise, Historical, Etiological, and Practical, on the Principal Diseases of the Interior Valley of North America*.<sup>39</sup>

Drake visited almost every community in the Middle West, described it (with particular attention to those aspects of the environment bearing on

<sup>34</sup> *Domestic Manners of the Americans*, I, 52-53.

<sup>35</sup> Bayrd Still, *Milwaukee: The History of a City* (Madison, 1948), 99-100, 248.

<sup>36</sup> Paul M. Angle, "Here I Have Lived": *A History of Lincoln's Springfield*, 91.

<sup>37</sup> *Early Western Travels*, X, 70.

<sup>38</sup> *The Rambler in North America*, II, 209.

<sup>39</sup> A second Series, with the same title, was published in Philadelphia in 1854.

health), and talked with the leading physicians. Almost invariably his accounts end with such statements as "all the forms of autumnal fever occur at this place," "autumnal fever prevails annually," and "in and around the town, intermittents and remittents prevail every year." As to personal habits, the strictures of previous visitors appear again in his pages. The use of alcoholic liquor, though not so widespread as formerly, was still excessive. Smoking prevailed to a great extent; the chewing of tobacco was even more common. Everyone ate too much, and too rapidly. As for bodily cleanliness, "an overwhelming majority of our population seldom bathe at all."

\* \* \*

The hardy pioneer? Hardy he had to be, else how could he have survived long enough to recall the happy days of his youth from the sunlit recesses of his memory?



## CHAPTER IV

# ORGANIZATION OF THE ILLINOIS STATE MEDICAL SOCIETY: THE HOUSE OF DELEGATES

BY FRANCES C. ZIMMER, Ph.B.\*

THE official proceedings of the governing body of any organization can be considered, fundamentally, the history of the organization itself. Printed transactions have come down to us since twenty-nine forward-looking, progressive physicians gathered in Springfield on June 4, 1850, and concerned themselves seriously and thoughtfully with the problems they had to meet medically, economically and ethically. Having come to order in the State Library Room, Dr. Rudolphus Rouse of Peoria assumed the chair on motion of Dr. W. B. Herrick of Chicago. The first action taken, "on motion of Dr. Blaney of Chicago," was a resolution "that we deem it expedient to proceed to the organization of a State Medical Society."<sup>1</sup>

That afternoon the group adopted a Constitution and By-Laws, and elected officers for the ensuing year as follows:

President . . . . .	William B. Herrick, Chicago
Vice-Presidents . . . .	Rudolphus Rouse, Peoria A. G. Henry, Springfield
Secretaries . . . . .	Edwin G. Meek, Chicago S. A. Paddock, Princeton
Treasurer . . . . .	John A. Halderman, Carlinville

These officers "were unanimously elected, and the Convention by vote, resolved itself into the Illinois State Medical Society."

These early meetings gave us many of our present forms and traditions, such as the Committees on Arrangements, Practical Medicine, Surgery, Obstetrics, Drugs and Medicines, and Publications.

\* Mrs. Zimmer received the Ph.B. degree from the University of Chicago. She is a charter member of the Medical Society Executives Conference. Her work with the Illinois State Medical Society started in January, 1936, and she is at the present time Executive Assistant to the Secretary of that Society.—*Editor*

<sup>1</sup>Zeuch found that the Society had originally been founded in 1840. For an account of that meeting, the reader is referred to Volume I of this series, p. 394.

On motion, the Society went into Committee of the Whole for the purpose of adopting a Code of Medical Ethics as based on that of the three-year old National Medical Association. It was resolved that a special committee be appointed to "memorialize the Legislature at its next session, praying the enactment of a statute providing for the registration of Births, Deaths and Marriages, and that the Committee cause a petition to that effect to be circulated as widely as possible through the State."

The State Legislature, in 1947, passed laws regulating the sale of various barbiturates. The State Society endorsed this law. In 1850, almost 100 years before, the Society "resolved that as members of the State Medical Society, we will discourage the sale of patent or secret nostrums, on the part of Druggists and Apothecaries throughout the State; and that so far as practicable, we will patronize those Druggists and Apothecaries, and those only, who abstain from the sale of such patent or secret nostrums."

All of this work was accomplished in two short days, and the men returned to their homes with plans "to meet at Peoria on the first Tuesday in June, 1851."

*The First Constitution and By-Laws.* The first Constitution and By-Laws were little more than a skeleton to provide the frame under which the small group of physicians could work and meet for scientific and business purposes. The preamble to this Constitution contains the nucleus of Article II of the present Constitution and By-Laws. It might well appear today as it was written then:

"Inasmuch as an institution so conducted as to give frequent, united and emphatic expression to the views and aims of the Medical Profession in this State, must at all times have a beneficial influence, and supply more efficient means than have hitherto been available here, for cultivating and advancing medical knowledge, for elevating the standards of medical education, for promoting the usefulness, honor and interests of the Medical Profession; for enlightening and directing public opinion in regard to the duties, responsibilities and requirements of medical men, for exciting and encouraging emulation and concert of action in the profession, and for facilitating and fostering friendly intercourse between those who are engaged in it; therefore,

"Be it resolved, in behalf of the Medical Convention of the State of Illinois that the members of the Medical Convention held in Springfield, June, 1850, and all others who, in pursuit of the objects above mentioned, are to unite with or succeed them, constitute a State Medical Society."

The Constitution provided for officers and standing committees, and the payment of an initial fee of \$2.00 upon being elected to membership. It specified that delegates should represent local societies, organized medical schools, hospitals, lunatic asylums and other permanently organized medical institutions of good standing in the state. Local societies had the privilege of sending to the Society one delegate for every five of its regular resident members, and one for every additional fraction of more than half

this number. The faculty of every medical college or chartered school of medicine was allowed two delegates. The professional staff of every chartered or municipal hospital and every permanently organized medical institution of good standing could send one delegate. Therefore, these early organizers planned that their Society would grow, and to the original twenty-nine members of 1850, there were thirty-one added in 1851.

*The First Code of Ethics.* These early physicians set about as their first order of business to establish that intangible, elusive quality—ethics. Under these high standards they waved the various banners of “the duties of physicians to their Patients”; this was first and foremost even as it is today. Then followed a list of the “Obligations of Patients to their Physicians.” However, these physicians had no public relations bureau to publicize the public’s duty toward them. These tireless family doctors said, hopefully: “A patient should never weary his physician with a tedious detail of events or matters not pertaining to his disease.”

Article I of the Code of Ethics discusses the “Duties of Physicians to Each Other and to the Profession at Large.” Duties are listed for the support of professional character, for “Professional Services of Physicians to Each Other.”

“Duties of the Profession to the Public and of the Obligations of the Public to the Profession” are presented.

A special short chapter, Article VI of Chapter II, deals with differences between physicians. “This is indeed a deplorable state,” they felt, “but if and when such a diversity of opinion exists it should be referred to the arbitration of a sufficient number of physicians, or a court-medical.”

#### 1851—PEORIA

Routine business filled the first full day of the June 3rd meeting. Such was also true of the morning session of June 4, 1851. However, in the afternoon a new committee was appointed to prepare a report on the registration of births, deaths and marriages, since the 1850 committee had failed to report.

Then came Dr. Erial McArthur of Chicago before the House with a resolution to the effect that the time had come when the people of the State of Illinois ought to “regulate by statutory enactment, the qualifications of those who practice medicine and surgery.” Part of Dr. McArthur’s resolution was to the effect that the Society should appoint a special committee of three members to take this matter under advisement and report at the next annual meeting a bill for the purpose of regulating the practice of medicine and surgery in the state. Then, if this bill were approved by the Society, it should be recommended to the consideration of the people represented in the General Assembly at the next meeting of the Legislature.



1852—JACKSONVILLE

One can read between the lines in reviewing the transactions of the afternoon session of Tuesday, June 1, 1852. The Secretary's report is none too subtle: "Dr. Rouse stated that the only inducement for his acceptance of the office of Treasurer had been that the Constitution makes the Treasurer, *ex-officio*, one of the committee of publications. . ." but as he had not been permitted to have anything to do with that part of the duties of his office, Dr. Rouse took that opportunity to disavow all responsibility in relation to numerous errors in a publication which, in its "present unfortunate shape" he considered as "reflecting very little credit upon the Contributors, the Society, its Committee, or the Press." No further comment was offered, but that same afternoon Dr. Edward Dickenson of Peoria became the new Treasurer, and Dr. Rouse delivered an address as the newly elected President. In this he stated that "Societies like ours have long existed in all the older States of the Union, and have been of great advantage to both the profession and the general community; but in our good State of Illinois where there is no legal protection of either, and where the medical profession is perfectly outlawed, the necessity and utility of such association and organization is exceedingly obvious."

Dr. N. S. Davis of Chicago offered \$20.00 as a premium for the best essay on the subject "The Differences in the Physiological and Pathological Action of that Class of Remedies Called STIMULANTS, of which Alcohol is the Type, and TONICS, of which the Bitter Barks and Iron may be considered as specimens."<sup>2</sup> All papers entered in the competition were to be sent to Dr. Rouse before May 1, 1853, endorsed with a motto and accompanied by the name of the author in a sealed envelop on which was to appear the same motto as on the essay. The committee to examine the essays and to award the "premium" was to report at the next "anniversary of the State Society." The committee also was instructed to see that the report was published in "several of the leading newspapers of the State."

1853—CHICAGO

During this meeting, various committees reported, including the Committee on Prize Essays. No award was made; no communications had been received! The contest was extended for another year.

Nothing of economic import was recorded in the minutes of this annual meeting. Dr. N. S. Davis, on behalf of the medical officers of the Illinois General Hospital, and Dr. W. B. Herrick, on behalf of the U.S. Marine Hospital, extended invitations to all physicians in attendance to visit these

<sup>2</sup> These early prize awards were the counterpart of our present-day scholarships and grants-in-aid for the advancement of medicine.—*Editor*



two institutions. The men accepted the invitations, and on Wednesday morning, June 8, 1853, the tour was made.

For the first time, the House made mention "that we have learned with much pleasure of the Institution of the National Pharmaceutical Association, and would hereby express a desire and intention. . . to cooperate with the laudable exertions of that body"—whereby interprofessional relations were born. The group drummed hard on the subject of education of apothecaries and druggists, and they asked again that the State set up licensing boards and that laws governing medical practice be passed.

Twelve delegates were elected to attend the meeting of the House of Delegates of the American Medical Association to be held in May 1854, in St. Louis. If any man so elected were unable to attend, he was empowered by action of the House to appoint his own substitutes, in order to assure full representation for Illinois.

These early physicians listened attentively to various reports from the Sections then established, and they also heard the Annual Address. This year Dr. N. S. Davis discussed "The Intimate Relation of Medical Science to the Whole Field of Natural Sciences." Parts of his address could be read today and would apply just as truly: "Medicine does not merely aim to alleviate and cure disease by sending its votaries to the couch of sickness, but it looks to a higher, nobler purpose than this; it seeks even the prevention of disease, not by the exhibition of pretended specifics to individuals, but by the removal of the causes from whole communities. . . . Everywhere the members of our profession, both in their individual and associated capacities, are investigating the sources of disease and urging upon the attention of legislators and municipal officers the means for their removal."

Public health was in an embryonic state; public welfare, sanitation and control of communicable disease were in their infancy. Nevertheless, the men felt that the forward strides had been long and that they lived in an enlightened era, for Jenner had "bequeathed to the world the boon of vaccination." They boasted of their "wide and enlightened views;" they fought for honor in their profession; they asked that "preceptors or practitioners take only those students versed in book knowledge" so that those given diplomas by medical colleges would be "true students of a mighty science."

#### 1854—LA SALLE

The fourth annual meeting of the Society opened on Tuesday, June 6, 1854, in the Congregational Church at La Salle. It was called to order at 3 P.M. by the President, Professor Daniel Brainard. Forty members attended, representing twelve county societies, hospitals and medical schools.

One of the first reports heard was that of Dr. Thomas Hall of Toulon,

Chairman of the Committee on Midwifery and the Diseases Peculiar to Women and Children. Though they were not yet specialists, Dr. Hall was reporting on an important phase of medicine to every "general practitioner."

Dr. N. S. Davis expressed his surprise and regret "that so many of the Standing Committees for the past year had entirely neglected their duty." He alluded to the fact that members of the Society looked to the reports of these committees for a large share of their interest in and profit from the meetings, and consequently "no man should accept a place, especially as Chairman on such committees unless he faithfully performs the duty assigned him." One hundred years later the Society still has committee chairmen who fail to make their Report to the House of Delegates, and the list of men willing to assume the true responsibility of committee appointments is not long, in view of the more than 9800 members on the official roll.

Dr. Davis was a positive character who exerted a positive influence and who expressed positive ideas. This is well illustrated in his address to the Society and the public on "The Physiological Effects of Alcoholic Drinks on Man" which he presented at the invitation of the Committee on Arrangements.

During the second day of the meeting, the Committee on Prize Essays reported that only one essay had been received. This, however, was "possessed of more than ordinary merit and was well entitled to the premium of \$20.00 donated by Dr. N. S. Davis. The sealed note accompanying the essay being opened, the name of the author was found to be Henry Parker, M.D., of Chicago, Illinois."

After this award was made, Dr. Davis donated another \$20.00 for an essay prize, and the House, by proper action, raised \$50.00 by contributions to be offered as an official Society prize.

A committee of three was appointed (Drs. Samuel Thompson of Albion, H. A. Johnson of Chicago and A. R. Chambers of Toulon) to obtain the names of the regular members of the profession throughout the state with their addresses. The committee was also urged to use its influence to procure the formation of county medical societies in all those counties in the state where none existed.

Instructions were given to the Committee on Arrangements "to omit preparing or having prepared by the local profession any general entertainment at the annual meeting of the Society."

The following amendment to the Constitution was presented which was to be laid on the table until the next annual meeting: "That respected members of this Society who may remove from this State, and distinguished members of the profession in other States, may be elected honorary members of this Society by a unanimous vote."

## 1855—BLOOMINGTON

This year the Society elected Dr. N. S. Davis as President, and the bound copy of the transactions of the House of Delegates in the files of the John Crerar Library carries the inscription in his own handwriting: "N. S. Davis—Our 5th Session." The Society still owed him \$56.00 which he had advanced for "current expenses," and the dues were raised to \$3.00 to pay the amount due.

Dr. David Prince of Jacksonville was appointed as chairman of a special committee to report on orthopedic surgery, a field in which he was interested for many years.

In order to protect the Society, Dr. Rouse presented a resolution which stated in brief that the publication of committee reports should not be considered as the adoption of the substance of such reports or communications by the Society. "The doctrines and opinions embraced in such reports and communications belong to their authors, and this Society, as a body, is not responsible for any such matters, except when expressly adopted by some specific action of this Society."

The House adopted a resolution that a committee of three (Drs. David Prince, E. R. Roe and J. V. Z. Blaney) "memorialize the Legislature with regard to additional provision for the insane and the establishment of an institution for idiots."

The President of the Society was authorized to fill any vacancy existing in the group nominated as delegates to the meeting of the American Medical Association.

The amendments to the Constitution that were proposed in 1854 were adopted, and the annual assessment was set at \$2.00 for the next year.

## 1856—VANDALIA

The members of the State Society assembled on June 3, 1856 in the Old State House in Vandalia and were called to order by the President, Dr. N. S. Davis, who had been one of the founders of the American Medical Association in 1847 and whose influence at the state level was a definite power. His Presidential Address was entitled "What Influence are Alcoholic Liquids Capable of Exerting, either in Preventing or Curing Tubercular Disease of the Lungs?"

Dr. E. Andrew of Peoria, in his Secretary's report stated that the expenses of publishing the transactions of the previous year's meeting of the House amounted to \$117.00, all of which he had paid from his own funds, "having received nothing from the Society." In the treasury, according to Dr. Blaney, was a balance on hand of \$96.00. The Treasurer also held \$26.00 in prize money and the offer of \$20.00 more from Dr.



N. S. Davis, which had not yet been awarded. Quickly the House took action to audit the accounts and recommended (1) that the annual assessment for the present year be fixed at \$3.00; (2) that the Treasurer be authorized to refund to Dr. Andrew the money he had advanced, and (3) that affairs be conducted on as businesslike a basis as possible.

Committees reported and new committees were appointed. Dr. A. L. McArthur of Joliet headed a special committee on the Physiological Explanation of Counter-Irritation. Again the House asked that a committee with "one from each County, be appointed, Dr. Blaney of Chicago being chairman, to memorialize the legislature to pass a law for the registration of births, marriages and deaths in this State."

The Constitution came in for the amendment: "Resolved that the Society shall choose one Permanent Secretary, to hold office during the pleasure of the Society, and whose duty it shall be to keep all the records, books and papers of the Society; and one Assistant Secretary, to be elected annually from the place where the next succeeding meeting is to be held. The Permanent Secretary, when not able to attend any given meeting, shall furnish the Assistant with so much of the records as are necessary for the accommodation of that meeting, which, together with the proceedings of the said meeting, shall be returned to him as soon as practicable after the adjournment of same."

Business was to run smoothly; records were to be kept; arrangements were to be made for the annual meeting from year to year. The finances of the new society were to be handled in a businesslike manner, with an audit of sorts and an assessment of dues upon the handful of members.

Standards were not relaxed. The House voted to expell Dr. A. G. Lawton of La Salle for "the practice of selling patent medicines and nostrums, and the publishing of unprofessional matters in the newspapers." Dr. Haskell, "implicated in selling nostrums," had sent a request that he might withdraw from the Society, and on proper motion his request was granted.

The House ordered 1000 copies of the Constitution and By-Laws and Code of Ethics "as now in force" which were to be printed and forwarded to each member of the Society. Twelve delegates to the next annual meeting of the American Medical Association were elected. The House voted to allow chairmen of committees "authority to have printed such circulars as may be required for the efficient performance of their duties, and that they present their accounts for the same and for postage, to the meeting at which they make their reports."

Dr. N. S. Davis asked that a committee of three be appointed on the Prize Essay Contest and that the committee be authorized to offer a premium of \$50.00 for the best essay on some medical subject.



The House voted that the local Committee on Arrangements should be requested to "consider the propriety of issuing annual cards of membership, with power to act."

Then everybody was thoroughly and politely thanked: Dr. Davis for his work in office and for his valedictory address; the Committee on Arrangements; the Masonic Fraternity of Vandalia; the citizens of Vandalia and the speakers at the meeting—all by official action with the Secretary instructed to "so inform those mentioned." So Dr. Davis as Secretary went back to Chicago to face the same tasks as are faced today: courtesy to those who had assisted, thanks to the speakers appearing before the assembled physicians, appreciation to the city officials where the meeting was held, a "bread and butter" letter to the officials of the building where meetings transpired—and with a mental resolve that next year the meeting would be more efficient, would run more smoothly, would offer more scientific information for those in attendance and would present a more unified front on economic and political problems. How far the little candle throws its beam! It is doubtful if our powerful torch of today burns any more brightly or is fed by any more enthusiasm than was this first glimmer, lit and tended so carefully by these early members of organized medicine.

#### 1857—CHICAGO

In the Lecture Room of Rush Medical College, the seventh annual meeting of the State Society came to order. The largest House, representing more groups and more county units than ever before, opened its session. Physicians from McLean, Boone, DeWitt, Rock Island, Winnebago, Cook, Union, Stark and Will Counties represented component branches. In order to enlarge the representation and to interest the membership, the House voted that any local society not sending delegates to the meeting but having members in attendance, "such members might act as delegates by reporting themselves to the Committee on Arrangements." In this manner, Coles, Edgar, Fayette and Montgomery Counties secured representation.

Dr. N. S. Davis made the first detailed report of the Publishing Committee for the fiscal year 1856-57. As Secretary, he had mailed circulars to all the members he could find in the different volumes of the transactions, notifying them of the amount of annual dues. As a result, he raised \$88.00, all of which he paid over to the Treasurer. All committees were sent written notices, telling of appointments and listing the names of the committee members. The transactions for 1856 were published at a cost of \$95.00. However, due to the condition of the treasury, the Secretary hesitated to have 1000 copies of the Constitution and By-Laws and the Code of Ethics printed; he expressed the sincere hope that this would be possible during the coming months.

The members of the Society were invited by the Sisters of Mercy to visit Mercy Hospital at a time convenient to the assembled physicians.

Another year rolled past and still no Essay Award was made. Dr. Davis proposed that the sum of \$50.00 be continued as a prize for the best essay on some medical subject to be presented during the coming year, and that the committee of three be continued to receive the material and make the award.

Not to be outdone by the gentleman from Chicago, Dr. J. M. Steele of Grand View offered a prize of \$20.00 for the best written practical dissertation on "The Uses of Opium in Inflammatory Disease," the contestants not to be over forty years of age.

Contract practice was condemned. The nomenclature they used was "the hireling system," but the ultimate results were the same. Their resolution stated "that the hireling system is not compatible with the true interests of the profession, and no member of this Society shall be allowed to hire his services by the month or year, to families or individuals."

The delegates were instructed to consider seriously the resolution offered by Dr. Stormont in relation to the hireling system; a committee was to report at the next meeting on this problem.

Dr. Noble of Independence, in his Presidential Address, struck the keynote of the meeting, in reality, the keynote of all meetings through the years: "Advancement is the order of the day, and no science, profession or business can remain stationary, while all external influences point onward and upward. . . . But, gentlemen, ours is not a science that disposes to inertia. A calm repose on laurels already won—the possession of truths elucidated by past observation and experience—the benefit of discoveries of the present and past ages—do not satisfy the genius of the Medical Profession. . . . The establishment of Medical Societies does, perhaps, more than any one thing toward stimulating individuals to particular investigations, and at the same time gives an opportunity for each individual to reap the benefit of every member's observation. Nothing can be better calculated to diffuse medical knowledge than an organization like ours, composed of delegates from local societies in different parts of this state, comprising in one body, men that have witnessed all forms of disease, each receiving the benefit of another's experience and observation."

#### 1858—ROCKFORD

On the first day of this annual meeting, several resolutions were presented to the House. The Permanent Secretary was instructed to prepare a roll of members, and to have the transactions printed and mailed to all members in good standing "and to no other members."

This year there was developed the pattern for the Annual Dinner and

other social functions which has been followed throughout the years. The House ruled "that the resolution forbidding the providing of public entertainments at meetings of the State Medical Society be only so construed as to free the Committee on Arrangements from all responsibility and pecuniary expense." From this day forward, the governing body of the State Society has authorized the payment of expenses contracted by local committees and chairmen of various groups, denied responsibility but assumed the bill, admonished the offender, and stated righteously that "no further action along this line is contemplated."

Dr. Blaney reported \$140.00 in the treasury and \$82.30 in prize money. But no award was made.

The House took final action on "the hireling system" and inserted one word in the resolution as presented the year before: "No member shall be allowed to hire his services by the month or year to *private* families or individuals."

Dr. Prince of Jacksonville (appointed at Bloomington in 1855) reported on "insane and Idiotic Persons" and a committee was appointed to continue to investigate conditions in the state. The committee which was appointed to "memorialize the legislature to pass an act to legalize dissections" reported that it would not be able to mature any such plan to present at this session of the Society, but that they would report through the *Chicago Medical Journal* as soon as committee work had progressed sufficiently.

Dr. Goodbrake of Clinton, in his Presidential Address, bemoaned the fact that it was the custom to send students east to attend lectures. "The time has come when we can boast of a sufficient number of medical schools supplied with every material necessary to impart instruction, hospitals included. . . . We should as a profession, pay more attention to medical jurisprudence. It should be more extensively taught in our medical schools; its importance more strongly impressed upon the minds of students; and we should all give it at least as much attention through life as we do any of the other branches, as it is most certainly not the least in importance."

#### 1859—DECATUR

In the morning session of the first day's meeting, Dr. D. W. Stormont of Grand View reported as the chairman of the first Legislative Committee. This group was known as the Committee on the Registration of Births, Marriages and Deaths, but its work was legislative in nature. Its chairman had been to Springfield where he "drew up a short memorial to the Legislature, and a complete draught of a Registration Law which were entrusted to Representative Mosely of Edgar County. They were introduced and referred to the Committee on Education of which Dr. Baines of Adams



County was the chairman, who was also a warm friend of the measure. The Committee reported favorably on the law, but on the vote on the final passage, it was lost." Most of the members of the legislature had never heard of such a law. The examples of New York and Pennsylvania had not been called to their attention, and the reason most gave for voting against it was that "there were not a sufficient number of persons in the State interested in the matter to secure its enforcement."

Dr. Stormont included in his report several requests and recommendations in the form of resolutions: (1) That the Committee be continued and another effort be made to have the law passed at the next session of the legislature; (2) that the Committee be required to prepare a copy of the uniform Registration Law, which was to be published in the ensuing volume of the Transactions of the American Medical Association so "altered, if in their judgment it may be necessary, as to conform to the peculiar policy of our State;" (3) that the Committee be instructed to transmit a copy of the memorial to every local Medical Society in the state for signature and transmission to the legislature, and (4) that every physician in the state be requested to explain to his immediate representative and senator the objects and workings of this law and urge him to vote for it.<sup>3</sup>

This insured constructive work and a growth of unity and political influence. Dr. Stormont evidently had spent time and money of his own on this project since no expense account for his work appeared in the annual report, nor did he ask for any financial assistance; only for approval and backing from all members of the Society and a unified action before the members of the Illinois legislature.

Another important resolution was presented to this House of Delegates relative to activity in the field of public health. Dr. A. Hard of Aurora offered an interesting "Preamble" for consideration which stated that the decennial census authorized by the Constitution of the United States was to be taken the next year, 1860. He stated that, if properly conducted, this survey would afford an opportunity of acquiring a vast amount of scientific and medical statistics which could be gathered with no additional expense. It was recommended to the State Society that a committee be appointed whose "duty it shall be to use all proper means to secure the appointment of competent medical men to take the census of 1860 in the State of Illinois. And also to recommend what statistics ought to be taken for the benefit of science and health, other than what is already provided by law." No action

<sup>3</sup> According to the present Director of the Department of Public Health, these records of births, marriages and deaths are still imperfect. The method of recording and keeping statistical data was brought before our 1947 legislature for consideration. The foot was in the door in 1859, and the interest of the profession was being aroused individually and collectively.

was taken by the House relative to this resolution, but it might be interesting to know how many busy Illinois physicians acted as census takers in this survey, what additional questions they asked and what use was made of the information so gathered.

The Committee on Prize Essays reported. They had two awards to present. After careful and thorough examinations, they awarded the \$20.00 prize offered by Dr. J. M. Steele of Grand View to the essay bearing the following motto: "Give anguish a tongue, and reason to a remedy, and they will commune together in blissful concord." The second prize of \$50.00, offered by Dr. N. S. Davis of Chicago and the Illinois State Medical Society, was awarded to the essay bearing the motto: "Gleanings from Uncle Sam's Farm." The envelopes were opened, and the author of the first essay was found to be Dr. A. S. Hudson of Sterling, and of the second, Dr. J. B. Phillips of Dixon.

This year the House recommended to the American Medical Association "that in the opinion of this Society, all the officers of the American Medical Association should be selected strictly with reference to *merit*, and without any regard to their place of residence. . . . That the custom of selecting the President of that Association exclusively from the profession of the city where their annual meeting is held is not only derogatory to the general character of the organization and calculated to lessen the honor which should attach to that office, but past experience has shown that it leads to local divisions, jealousies, and injurious partisan strife. . . . That the delegates from this Society to the Association be instructed to use their influence to abrogate the custom alluded to in the preceding resolution." The Secretary was instructed to furnish copies of these actions to other state and local medical societies and ask their attention.

The offer of Dr. N. S. Davis of \$20.00 for a prize essay was renewed for the ensuing year, and Dr. J. S. Whitmire offered \$20.00 for a prize essay on "The Use of Strychnine in the Treatment of Chronic Malarial Maladies."

Dr. F. B. Haller asked that the House pass a resolution whereby no individual who was under the sentence of expulsion or suspension from any local society would be allowed any of the rights or privileges as a member of this Society until reinstated in full membership in his local Society. This caused some discussion and was finally tabled.

Dr. Davis was instructed to send the transactions of this House to other state societies. Three representatives of the Illinois Society were appointed to attend the annual meeting of the Indiana State Medical Society.

A Constitutional amendment pertaining to the annual meeting of the Society was suggested by Dr. N. S. Davis to lay on the table until 1860. This suggested that "instead of the words 'shall meet annually on the first Tuesday in May' substitute 'shall meet at such time and place as shall be desig-

nated at each Annual Meeting.' " Also by proper actions, meetings of the Society in the future were to be opened by prayer.

## 1860—PARIS

A presentiment of unrest may have made itself felt among the physicians in Paris early in May of 1860, but their official minutes make no mention of national discord, and they clung to the business at hand. Quickly they brought important matters before the House. Dr. N. S. Davis presented a resolution, which was adopted, that the Constitution of this Society did not contemplate the election of permanent members residing out of the state, but that a permanent member of this Society elected while residing in Illinois would not lose his membership "merely by moving out of it."

The Society chose Jacksonville as the place of the 1861 meeting, not realizing that this meeting would never be held; that the guns of Fort Sumter in Charleston Harbor would roar an answer to the volleys fired on April 12, 1861, and that the lawyer from Illinois would write his letter to Mrs. Bixby and later pen his immortal message delivered at Gettysburg.

In the interim they discussed hygiene and sewerage of cities; laws for the registration of births, marriages and deaths; essays to be submitted for future awards; the education of "idiotic and imbecile" children, and the problem presented by the itinerant practitioners.

In 1860, the first discussion of medicolegal activities was presented to the Society by Dr. David Prince, President, in his valedictory address. Law suits were being filed against physicians throughout the state. Dr. Prince asked: "Taking the law as it is, and the courts and juries as they are, what is the course the practitioner should pursue in justice to himself and the public?" Physicians were warned against making chance remarks. Fractures as the basis for malpractice suits were "by far the most common cause, as evidence with regard to proper or improper treatment is in them reducible to greater certainty." The medical witnesses "are often bitter enemies to members of their own profession, and lawyers delight in playing the doctors off against each other. . . . My opinion is that we shall have no reform of this bad system until a Board of Medical Assessors (consisting of men in high repute in their respective departments) is appointed."<sup>4</sup>

Dr. N. S. Davis was invited to present the annual lecture before the assembled physicians. He discussed "mutual relations and consequent mutual duties of the medical profession and the community." Universal truths studded his oration: "The family physician is admitted to the innermost circle of human society. . . . A physician is under equal obligations so long

<sup>4</sup> At the second meeting of the House of Delegates on May 14, 1947, an amendment to the Constitution established a Committee on Medical Testimony to function in this still fertile field.



as he continues in the profession, to bestow upon its cultivation and application in the treatment of disease, his earnest and undivided attention. . . . Nothing is more certain than that no man can do justice to two or three diverse pursuits at one and the same time. . . . And I am ready to exhort you to go on, faithful to your chosen calling, regardless of the smiles or frowns of those around you, until at last you reach that field on which the grim messenger will never enter." Unknown to them then, soon many of the physicians listening to Dr. Davis that evening would be working on fields where that same "grim messenger" had stalked so recently, amassing the statistics which were to constitute the report of the Committee on Military Surgery presented to the 1864 House of Delegates.

#### 1863—JACKSONVILLE

The flyleaf of this year's transactions reads: "Eleventh Annual Meeting, for the years 1861, 1862 and 1863, Jacksonville, May 5, 1863." The first war meeting of the Illinois State Medical Society opened in the Old Presbyterian Church in Jacksonville.

At the opening session, Dr. D. W. Stormont, Chairman of the Committee on Registration of Births, Marriages and Deaths, reported: "In the present distracted condition of our nation we cannot recommend any measures as likely to be efficient in securing the passage of this law. Hygeia is deposed; Mars now reigns supreme."

Dr. J. H. Hollister offered a resolution "that we tender to those of our members serving as medical officers in the Army, and now absent in the field, assurances of our kind remembrance of their humane labors and personal sacrifices; that we congratulate them upon their being able to contribute services so valuable to a cause so *noble*, and that we join with them in earnest desires, and personal efforts if need be, for the early restoration of *peace* and integrity of the *entire* Union."

The members in attendance elected new officers, instructed committees to proceed as before, and voted that an examining committee from the Society should attend the examination of candidates for graduation from the Chicago Medical College and the Medical Department of the Lind University. The cooperation between the schools and organized medicine was such that, in all probability, this committee was the first Medical Examining Board in Illinois, although it operated without state supervision or laws.

Then they met in the entry of the church, on the streets of Jacksonville, in the stuffy railroad station, perhaps in rooming house parlors and hotel lobbies, to discuss that *lonely* man in the White House, the campaigns under way, whether the war could last another year, the blockade of the South, the ability of the Generals, the power of both Armies. Was the prison

at Rock Island discussed? It does not appear officially in their records. Dr. Stormont said: "Perhaps at our next annual meeting these conditions. . ."

#### 1864—CHICAGO

However, when the Society met in Chicago on May 3, 4 and 5, 1864, the war was not over. Dr. N. S. Davis was instrumental in securing invitations for the visiting physicians to be guests at Mercy Hospital. Dr. M. O. Heydock, Chairman of the Committee on Arrangements, presented invitations from the faculties of the Chicago Medical and Rush Medical Colleges, the staffs of Marine and Mercy Hospitals, and from the surgeons of the military hospitals at Camp Douglas to visit these institutions on Wednesday and Thursday.

Dr. Davis invited members of the State Society and the Chicago City Medical Society to a social entertainment at his home on Wednesday evening. Fevers, the effects of alcohol, the state of the nation, the report of the Committee on Military Surgery, the wards at Camp Douglas—which of these subjects served as the main topic of conversation when these men gathered in the Davis home?

War and economics wove bright threads into the minutes of the transactions this year: "Resolved that a committee of three be appointed to consider in what respects the pecuniary interests of the medical profession suffer from unfavorable or deficient legislation. . . ." And: "Whereas Dr. S. York of Paris, Edgar County, Illinois, an honored and highly esteemed member of this Society, has been recently stricken down while in the service of his country by the hand of lawless violence. . . Resolved that we deeply sympathize with his afflicted family and friends in this hour of their bereavement, and a copy of this resolution be sent to the family of the deceased." And: "Resolved that the present pay and rank of surgeons and assistant-surgeons in the army is inadequate to compensate them for the services required of and performed by them, Resolved that through the National Medical Association, and our senators and representatives in Congress, to have our medical brethren in the field receive at least a reasonable compensation for their services and sacrifices while they are braving the dangers of the camp and caring for the soldiers of our Country."

#### 1865—BLOOMINGTON (The Tribute to Lincoln)

The Society, despite the war years, was growing. If it were possible to check the age group present in 1865, in all probability we would find the older men carrying the Society load while the younger members of the profession returned slowly from military service.

Since the President of the Society, Dr. A. H. Luce, was ill and unable to

attend the meeting, a resolution was passed that a committee of five express to him the assurance of "our unwavering professional regard."

The report of the Secretary stated that committees had been notified of their various responsibilities; that the transactions of the House of Delegates had been published in two medical journals in such a way as to reduce the cost of paper and press work, 300 copies being printed at a cost of \$219.76 with an unpaid balance due of \$111.95. He further stated that he had from 50 to 150 copies of the transactions for each year since 1856, but that all copies of the Constitution and By-Laws, the Code of Ethics and the membership list were gone.

In view of these anticipated printing bills and the balance due on the 1864 printing, the dues were assessed at \$3.00.

The House passed a motion that the official transactions of the meeting should be published in leading newspapers of the state, and that members of the House should encourage favorable newspaper comment.

Twenty delegates were elected to represent the Society at the meeting of the American Medical Association.

Dr. H. Noble, in behalf of his committee, made the following report relative to the death of the President of the United States:

"Mindful of the deep gloom that rests upon all loyal hearts as the remains of our lamented President are being borne through our midst, to their last resting place; cherishing with inseparable affection with them all that is dear in home and a united land; ready at all times to render personal services and sacrifices for their preservation and defense, second to those of no other class of men, we, the members of the Illinois State Medical Society in Annual Session, convened, desire to make record of our regard for our deceased Chief Magistrate, and the causes that led to his assassination in the following resolution:

"First, RESOLVED that in the death of ABRAHAM LINCOLN, President of the United States, we mourn the loss of an able and pure patriot, a man of the people, allied to them by every tie of interest and affection, earnestly devoting every energy of his being to integrity and welfare of the entire Union, stricken down by a ruthless and dastard hand, aimed not at himself but the heart of the American Republic.

"Second, RESOLVED that in the assassination of the President are manifest the legitimate fruits of that spirit which gave birth to and fostered the rebellion. That too indifferent opposition, and even expressions of encouragement from portions of the Northern press, and the too great leniency of all our people toward treason and traitors, have rendered us all, in a measure, guilty of this mournful result. The President is slain, but the Government still survives; and we here pledge to it a zealous and resolute support in all measures necessary to arrest and punish treason. We pledge ourselves to sustain our Government with strong arms.

"Third, RESOLVED that we commend to the favorable consideration of the American youth, the life and services of our lamented President, as a brilliant evidence of what are possibilities within the reach of the humblest child of our Commonwealth."

This was signed by Drs. H. Noble (Chairman), J. H. Hollister and M. D. Skinner.



Dr. N. S. Davis, in his address, mentioned the installation of sewers in the streets of densely populated cities. The ratio of mortality was reduced some 25 per cent. Construction was being regulated, and public and private buildings now had "ventilation." There were workhouses for the poor, hospitals for the sick, asylums for the insane, and prisons for the criminals. Laws of contagious and infectious diseases were being developed. Pleas were being made for postmortems, and still the profession fought for the registry of births, marriages and deaths.

In the By-Laws as amended there is found the following statement relative to a violation of the Code of Medical Ethics: "Ground for suspension: In case of charges preferred against any member which might lead to his censure, suspension or expulsion, the Secretary shall give the accused a written copy of the charges preferred. All such matters shall lie over to the next annual meeting."

According to the Constitution, delegates were seated in the House to represent county medical societies, medical colleges, hospitals, asylums and other medical institutions. They were elected for one term, "until another is appointed to succeed him." One delegate was allowed for every five members and major fraction thereof from the county societies; two delegates represented each college and school of medicine, and each hospital was entitled to one representative. The annual meetings were to be held the first Tuesday in either May or June, were never to be held in the same place two consecutive years, and this was to be determined by a vote of the Society.

#### 1866—DECATUR

The turbulent waters in the canyon of civil war had run out. The whirlpools of reconstruction sucked and eddied through the land. Johnson had replaced the attorney from Springfield in the White House. Hostilities had ceased, but the wounded were still to be cared for.

Interest at this meeting was largely scientific; the business affairs of the Society were slow to get under way. There was an air of lethargy prevailing in the House, as if the scars of the war were too raw and new to allow the men time to turn from medicine to matters of economic interest.

Dr. N. S. Davis was not able to attend the meeting, and it was reported to the House that he "suffered from a severe illness."

Adams County brought charges of unethical conduct against Dr. Addison Niles of Quincy. A copy of the charges had been sent to him and he was notified to be present at the next annual meeting for a hearing. By proper action the House voted "that we charge Dr. Niles with having violated the Code of Ethics by representing the so-called Quincy Medical Society, which we consider irregular, being composed, in part, of members who had been expelled from the Adams County Medical Society."

Twenty-five delegates were elected to the House of Delegates of the American Medical Association.

Dr. S. T. Trowbridge of Decatur presented a communication in the form of a law to be enacted by the State Legislature, designed to secure a higher grade of qualifications for practicing physicians in Illinois. The committee was to urge passage of such a law and secure all possible publicity for work of this type.

More physicians were present at the 1866 meeting than ever before in the history of the Society.

#### 1867—SPRINGFIELD

The seventeenth annual meeting assembled in the Representatives Hall, June 4, 1867, in Springfield.

The House passed a resolution that the "so-called Quincy Medical Society is not entitled to representation in the Illinois State Medical Society." Permanent members were granted the right to vote, the same as delegates, and the Constitution was amended to fix the annual meeting dates of the Society on the third Tuesday in May each year.

#### 1868—QUINCY

The Society was called to order in Lincoln Hall, Quincy, on May 19, 1868. The problem of the Quincy Medical Society had been referred to a committee at the 1867 meeting, and the committee was ready to report. Perhaps the fact that this annual meeting was held in Quincy added fuel to the fire. The members of the Adams County Medical Society apparently saw no reason for the seating of delegates from the Quincy Medical Society. The situation may have been a contributing factor in the Constitution and By-Laws eventually providing that "only one component medical society shall be chartered in any county." However, the committee presented a resolution which provided "that the Quincy Medical Society is entitled to representation in the Illinois State Medical Society." Following heated debate, led by Drs. Watson and Robbins, Dr. N. Wright called for the question on the motion, and the resolution was carried by a vote of 20 to 15. The problem was shelved, however, since on May 20th, Dr. Robbins of Quincy offered a series of preambles and resolutions ridiculing the Society for its action in admitting the Quincy Medical Society to representation; these "were laid on the table by a vote of yes 20, noes 10."

At the morning session of May 20th, the serious consideration of the convention was given to the quality of medical schools within the State of Illinois. A resolution was adopted which provided that (1) they would receive no young man into their offices to read medicine unless he was possessed of such qualifications as were recommended by the Teachers' Convention of 1867; (2) that they, as exponents of the sentiments of the

profession of Illinois, and having "the glory" of their profession and the "welfare of humanity" at heart, would encourage and patronize such schools only as gave the most thorough and systematic course of teaching, *regardless of men or place*, and (3) that the schools of Illinois be requested to so modify and extend the time of teaching as to make them as thorough as the times demanded "and equal to any schools in the world."

Obviously, teaching and scholastic standards were being considered throughout the country and would ultimately come to the attention of the men interested in medical problems at the national level. It was only a year later that the American Medical Association asked for cooperation from state organizations in problems similar to these in Illinois.

In 1952, the House of Delegates requested that the Council appoint a Committee on Necrology. However in 1868, a resolution had been passed "that there shall be a regular standing Committee on Necrology, whose duty it shall be to report, annually, brief biographical notices of deceased members."

Amendments to the Constitution were presented establishing a Committee of Investigation (or Board of Censors) whose duty it was to investigate all charges made against any member of the Society.

The meeting place for 1869 was to be Chicago, and adjournment followed the passage of a resolution "that the thanks of the Society are hereby tendered to the Chicago, Burlington and Quincy Railroad Company for their liberality in passing the delegates to this meeting over their road home free of charge!"

#### 1869—CHICAGO

The nineteenth annual meeting of the Society assembled in the Common Council Room in the City Hall in Chicago. It was called to order at 10 A.M. by the President, Dr. S. T. Trowbridge of Decatur. Apparently a meeting in Chicago brought out an excellent attendance, as there were recorded as present representatives from various county medical societies as well as from the Aesculapian Society, Fox River Valley Medical Association, Military Tract Medical Society, Rush and Chicago Medical Colleges, Cook County Hospital and Chicago Eye and Ear Infirmary.

The Secretary introduced Dr. Hiram Corliss of Greenwich, Washington County, New York, as a regularly accredited delegate from the New York State Medical Society. After being welcomed by the President, Dr. Corliss responded with an interesting address.

The finances of the Society were reported to be in good order. There was a balance on hand so dues were set at \$3.00 per annum, "and a very general payment of annual dues will be needed to maintain the financial credit of the Society."

Dr. N. S. Davis invited those present "and their ladies" to attend a re-



ception at his residence on Wednesday evening. Having filled the office of Permanent Secretary of the Society for ten years, Dr. Davis tendered his resignation to the House before the afternoon session on Tuesday.

The first recorded request for cooperation from the American Medical Association was brought to the House on Thursday morning by Dr. Davis. As a result of serious thought at the national level, the American Medical Association was taking the first steps to improve the *quality* of medical care offered the people of the United States. The Council on Medical Education and Hospitals had been conceived, and medical examining committees were even then functioning. The resolution presented by the American Medical Association is so much a part of modern medicine and has come down through the years so intact that it is well worth while to reprint it in its entirety:

"WHEREAS, The history of medical legislation in the various states of this Union, clearly shows that no reliance can be placed on either the uniformity or the permanence of any laws relating to the practice of medicine; and

"WHEREAS, The results of all the efforts made during the last twenty-five years, to elevate the standard of medical education through concert of action among the numerous medical colleges of this country, have proved with equal clearness that such concert of action in an efficient manner is unattainable, therefore be it

"RESOLVED, That whatever is done to establish and maintain a just and fair standard of medical education throughout our whole country **MUST BE DONE BY THE PROFESSION ITSELF**, through its own voluntary organizations, in the same manner that it now establishes and enforces its **CODE OF ETHICS**. The profession is as competent to declare, through its representatives in the national, state, and local societies, what shall be the standard of attainments for those to be recognized and admitted into its ranks, and to establish the boards or agencies by which compliance with such standard shall be ascertained, as it is to declare what shall be the ethical rules governing the conduct of those already admitted.

"RESOLVED, That this Association earnestly requests each State Medical Society to appoint annually one or more Boards of Examiners, composed of five thoroughly competent members, whose duty it shall be to meet at suitable times and places, for the examination of all persons, whether graduates of colleges or not, who propose to enter upon the practice of medicine in their respective States, except such as have been previously examined and licensed by a similar Board in some other state.

"RESOLVED, That each State Medical Society be requested to require its Examining Board or Boards to exact of every applicant for examination, adequate proof that he has a proper general education; is twenty-one years of age, and has pursued the study of medicine three full years, one-half of which time shall have been in some regularly organized Medical College, whose curriculum embraces adequate facilities for didactic, demonstrative, and hospital clinical instruction.

"RESOLVED, That each State Medical Society be requested to act on the foregoing propositions at the next regular annual meeting after the reception of copies of the same, and if approved and adopted by the State Medical Societies of two-thirds of the States, this American Medical Association shall deny representatives from all organizations who longer refuse to comply with the same, and shall recommend the State Societies to do the same, and all persons who, after that

date, seek to enter upon the practise of medicine without first receiving a license from the State Board of Examiners, shall be treated ethically as irregular practitioners.

"RESOLVED, That in adopting the foregoing resolutions, by which it is proposed to treat the medical college diploma the same as the diploma of any literary college, this Association is actuated by no desire to injure the medical schools of our country. On the contrary, by the adoption of the fourth resolution at the same time that the value of the mere college diploma is practically nullified, it is the desire, and confident expectation, that those institutions will be greatly benefited; because they will be forced to rival each other in the extent and efficiency of their courses of instruction, instead of the number of diplomas which they can annually distribute."

This communication was read to the House. Owing to the importance of the subject, it was voted that the material be referred to a special committee with instructions to report back to the House at the next annual meeting of the Society.

Another resolution was adopted which still stands on the records of the House of Delegates: "RESOLVED, That it shall be the duty of the Chairman of every Committee of this Society to invite all other Members of this Committee, at least three months before the next Annual Meeting of this Society, to contribute to the report to be made by the Committee. And further, he shall submit the report to all other Members of the Committee who have signified a desire to take part in the same, for their action." The House did not approve of one-man committees in the early days and thus took official action to avoid such a situation occurring. This action should be called to the attention of all committee chairmen today.

Official action was taken to appoint representatives to the meetings of the state medical societies of California, New York, Missouri, Michigan, Wisconsin, Indiana and Iowa.

The Society had more business on its agenda. Medical economics as such was developing. Cooperation with other state societies and with the American Medical Association was becoming a part of the work of the House of Delegates. The realization that medical organizations could be used for the improvement of the practice of medicine was dawning. Organized medicine was extending its hand to each physician, asking him to raise his standards, to grow in knowledge and power, to band together for the good of mankind and the profession itself.

#### 1870—DIXON

The 1870 meeting of the House of Delegates had several very important matters to consider, the report on the resolution from the American Medical Association being one of the most pressing items on the agenda. The committee which reported to the House consisted of Drs. N. S. Davis of Chicago and David Prince of Jacksonville, the two men who probably

carried more weight before the House than any other two physicians in Illinois. They felt that the elevation of the standards of medical education was definitely a concern of the medical societies and that the facts presented in the 1869 Preamble were "true to the fullest extent." They approved the efforts made at the national level to secure the cooperation of the state medical societies, and stressed the fact that law and theology established courts or tribunals before which men presented their qualifications prior to entering the practice of law or the ministry. It was pointed out that the medical profession, through its state and national organizations, could raise the standard of "ethical practitioners." But "on the contrary, certain rules of ethics, voluntarily adopted by our medical organizations, having no sanction of civil law, but distinctly indicating conditions of recognition for members of the profession, are very generally respected and obeyed. So if every State Medical Society would appoint proper boards of censors who, after a given date, should be ready to thoroughly examine every candidate for admission into the ranks of the profession, and the submission of every candidate to such examination and the procurement of a license was made a positive requirement for eligibility to membership in the local, State or National Medical Societies, and for recognition as a REGULAR practitioner, it would soon come to be as universally complied with as any other well established rule of the profession."

Drs. Davis and Prince closed their report with a two-fold resolution: "(1) That the Society cordially approve the positions contained in the American Medical Association resolution, and (2) that the Society approve the standard of preliminary education agreed upon by the Convention of delegates from medical colleges in Cincinnati in 1867; and that it should be the duty of every local and state medical society to appoint annually a board of censors whose duty it shall be to examine all persons who propose to enter upon the study of medicine, and to give a certificate of qualifications. Furthermore, where such boards exist, it shall be considered a violation of the ethics of the profession for any practitioner to receive a student into his office before he has procured a satisfactory certificate from such board."

The House approved a resolution stressing the fact that it was the duty of the Legislature of the State of Illinois to make such legal provisions as to insure persons who have committed a capital crime and been cleared of same on account of the plea of insanity being sent to the lunatic asylum as being dangerous members of society. A committee was appointed to "procure such action."

The Constitution and By-Laws and the Principles of Medical Ethics were published with the transactions of the 1870 meeting. Under the heading "Of the Duties of the Profession to the Public, and of the Obligations of



the Public to the Profession," we find that "as good *citizens*, it is the duty of physicians to be ever vigilant for the welfare of the community and to bear their part in sustaining its institutions and burdens; they should also be ever ready to give counsel to the public in relation to matters especially appertaining to their profession, as on subjects of medical policy, public hygiene and legal medicine."

In these early records it is difficult to follow the transition from medical economics, legislative work and business proceedings to scientific discussions. The men were all seated as a part of the Society itself, and the items for consideration came before the House at the discretion of the presiding officer. The scientific presentations consisted primarily of reports of standing committees; resolutions regarding legislative work were heard, and financial reports were sandwiched between Necrology and Adjournment.

#### 1871—PEORIA

About 1870 something seemed to have happened to the collective thinking of the Illinois State Medical Society. There was a listlessness, a multiplicity of purpose, a diversified scattering of thought which was apparent in the wanderings of the House of Delegates at the Peoria meeting in 1871. In the first place, they added outside activities and outside speakers to their agenda. The Council and the citizens of Peoria invited the meeting to attend "an exhibition of the Holly Water Works, a carriage ride around the city, and a railroad excursion to Prospect Hill (about four miles distant) on the Peoria and Rock Island Railroad." Also for the first time, the Mayor of the host city was present and spoke, and he introduced the City Attorney who also spoke.

Only a few physicians remained alive who had participated in the founding of the Society twenty-one years before in the city of Peoria. Dr. J. Perine Johnson, "one of the survivors of that little band," spoke nostalgically of the founding of the Society which had "passed safely through the perils of infancy and the inexperience of youth, to reach its majority of today, and exhibit such a vigorous and flourishing manhood." However, upon becoming of age, the singleness of purpose seemed to have dissolved into a maelstrom of theory: the aggravation of disease by dry south and southeast winds; the effect of temperature and moisture on the production of disease, the "kind of atmospheric impurity" which existed in certain areas.

This annual meeting was extended to three days, with several of the important committee reports scheduled for Thursday. Social activities were new to the Society; except for the pleasant evenings at Dr. N. S. Davis's home in Chicago, members had had no interests other than scientific when in attendance at an annual meeting of the Society. The affairs of the Society

seemed in a period of change and transition. The war was not too far in the past; the economic condition of the nation under Ulysses S. Grant was sliding into the depression which peaked during the last years of his term of office as President of the United States. Perhaps the science of medicine itself reflected the uncertainty and strife around it.

Those in attendance at the 1871 meeting in all probability enjoyed the first scientific exhibit provided by a member of the profession at an annual meeting of the Society. This was a demonstration of a fracture bed by Dr. C. Truesdale of Peoria.

#### 1872—ROCK ISLAND

The 1872 meeting was called to order by the President, Dr. Joseph O. Hamilton of Jerseyville, the "first native of Illinois on whom this confidence has been bestowed," and the Illinois State Medical Society paid . . . tribute to the first President whose very being sprang from "the most fertile soil the sun ever shone upon." The Rev. Mr. Maibee of Rock Island opened the meeting with prayer.

Dr. José Pereira Rego Filho of Rio de Janeiro was elected to honorary membership because of valuable mortuary reports from the City of Rio and its famous Misericordia Hospital during recent epidemics, sent to the Society through Dr. H. Webster Jones.

The great fire had swept through Chicago on October 9, 1871. The Treasurer, Dr. John H. Hollister, recorded his indebtedness to Dr. M. M. Granniss for his "special effort in rescuing our book of records . . . in which is contained a full statement of the membership and finances of the Society for the last ten years." Because of the fire, the House approved a resolution that the Committee on Publication be authorized to pay to Fergus' Sons "such sum as said Committee shall deem just, not exceeding \$100.00, to compensate them for their loss on the edition of the Transactions for 1871, which was burned in the fire of October last."

Dr. D. W. Young of Aurora introduced the following resolution, which was adopted:

"WHEREAS Medical Men are frequently called to testify in courts of justice, as *experts*, giving professional opinions in cases where thousands of dollars of property are involved—are called upon to give information that has cost them years of study, and thousands of dollars to obtain, and

"WHEREAS it is an injustice for the public to demand such professional opinions and information, at an expense paid ordinary witnesses, therefore

"RESOLVED, That we recommend that medical men refuse to testify as *experts*, in courts where a purely medical opinion is required, until a reasonable fee is paid."

The Society was becoming more polished in its proceedings, and Dr. Young offered another resolution (which met with approval) that the

"permanent Secretary be requested at future meetings of this Society to employ a professional shorthand reporter, to report verbatim all the proceedings, including the discussions."

Thirty-five delegates were elected to the American Medical Association House of Delegates.

#### 1873—BLOOMINGTON

For the first time, a public stenographer made verbatim notes of an annual meeting of the Illinois State Medical Society. At this time the format of the transactions changed radically; instead of a general summary of the agenda followed by scientific presentations, now the Society business with official actions was recorded, followed by scientific papers, heated discussions, etc., exactly as the sequence developed before the House. This reporter style makes summary difficult, but it does spotlight the arguments on the floor, silhouettes the personal scientific differences between the men, and develops for the reader a clear picture of the various cliques, both political and scientific, which brought pressure to bear on the assembly.

Dr. Andrew McFarland presented an interesting paper on Medical Jurisprudence: "And here let us observe that a medical man does a wrong, not only to himself, but to the whole body scientific, who fails to have his services recognized and rated somewhat in proportion to their value in the case. . . . Neither should the examiner trust to memory alone in his record. . . . Every fact should be in writing; while the eye can rest on the fact while being written down. . . . All that can reasonably be required, is the possession of the *average* skill of men of his class and opportunities. . . . It may seem unnecessary, after so much has been said upon it, to caution all who have to appear before courts, against language above the comprehension of those to hear it. This woeful error still stands too justly charged against us. . . . Brevity, lucidity, and simplicity will always mark the language of the successful expert. . . . It is to be deplored that the science of the mind, as well as its diseases, seem of late to receive, less than formerly, the attention of medical men. How little account is made of the patient's mental state, when listening to his narrative of his individual sensations and acts. . . ." The Bureau of Legal Medicine of the American Medical Association is still echoing these sentiments, praying that members of the medical profession, especially in court, speak in the "language of men."

#### 1874—CHICAGO

In 1874, the problem of qualifications for membership came before the House for consideration. Dr. J. O. Hamilton made the motion that those individuals applying for membership present some evidence of graduation at a medical school. After prolonged discussion, the motion carried.

The question of the payment of dues arose. The Secretary stated that he



believed the rule was that if a member failed to pay his dues for a term of five years, his name was dropped; but if he made his appearance at any time within those five years, he was charged only one year's dues and was restored to membership without any action on the part of the Society.

Later the Secretary asked to call from the table an amendment to the Constitution offered in 1868 to the effect that every member of this Society, or any delegate to it, must be a member in good standing of a local society, if one existed where he lived. He pointed out that five men could constitute a medical society and "these may take exceptions to one offering himself for membership, and thus put it out of his power to become a member if this amendment is acted upon." Dr. Fitch said: "I was much interested, because many local Societies were suffering for regular attendants, and for membership, while these gentlemen would ignore all local societies, and come to the State or the American Medical Association, and become members, regarding it as a greater honor than to be a member of a local Society; they would thus be no aid to the home organizations. . . . It seems to me, this Society should be like all other delegated bodies. Where a man loses position in a lower Society, he should lose it in the higher. It is to compel a man who wants the honor of belonging to a State Medical Society to be a member of his local Society, if one exists in a reasonable distance. We know that there are a great many men from this State, and throughout the Western country, who entirely ignore their local Societies; they have nothing to do with them; and yet they go to the State Societies and to the American Medical Association and get all the honor they are capable of conferring upon them."

1875—JACKSONVILLE

(The Twenty-Fifth Anniversary Meeting)

A picture of the physicians attending the 1875 annual meeting appears mounted in the front of copies of the minutes of this year's session. Dr. A. W. Cadman placed the group and took the picture upon the front steps of the Hospital for the Insane in Jacksonville. Innumerable high silk hats are seen, and one woman with full sweeping skirts and a wee umbrella. Dr. Sarah H. Stevenson of Chicago had been elected to membership; perhaps it was she.

Dr. David Prince, as Chairman of the Committee on Arrangements, announced plans for the Society to visit the State Institutions for Feeble-Minded Children, the Deaf and Dumb Institution, the Blind Institution, and the Hospital for the Insane.

Legislative work at this session was extended to the field of federal activity. The Society passed a resolution specifically urging the representatives in Congress from Illinois to use their efforts in behalf of such legis-

lation as would place the Medical Corps of the Army on an equal footing with the officers of the other staff corps of the Army and of the Medical Corps of the Navy.

Dr. E. W. Gray of Bloomington presented a paper on the subject of smallpox in which he said: "There is no cure for smallpox yet known. . . . But if smallpox cannot be cured, it *can* be prevented, and prevention is even better than cure. That it can be prevented was announced to the world 75 years ago, by that apostle of humanity, the illustrious Jenner." Then Dr. Gray asked for and secured passage of a resolution for the Society to appoint a committee "to prepare and present a memorial to the Illinois Legislature, praying for the enactment of a law which will require all pupils of the public schools, and other educational institutions supported in whole or in part by state or county tax, and all inmates of asylums, hospitals, reform or correctional schools, workhouses, jails, penitentiaries, etc., supported at public expense, to be vaccinated, upon admission to the several establishments, unless satisfactory evidence is furnished to a competent inspecting physician that the parties are fully protected by previous vaccination."<sup>5</sup>

The third day of the meeting came to a close. One of the last actions taken was the passage of a resolution "that the members of the Illinois State Medical Society at the adjournment of the 25th annual session, desires to express to the members of the medical profession, and the citizens of Jacksonville their high appreciation of the courtesies and general hospitalities, that they have met upon their arrival in this city. . . ."

#### 1876—URBANA

The Society met in Urbana on May 16, 17 and 18, 1876, and listened to an address of welcome from Dr. Milton Gregory, President of the State University.

Dr. Sarah H. Stevenson was a delegate from the Chicago Medical Society. That was unusual enough, but Illinois sent her as a delegate to the meeting of the American Medical Association in Philadelphia that year. And she went, and became the first woman member of the House of Delegates of the American Medical Association. When her name was called in the roll call, Dr. William Brodie of Michigan moved that the names of all female delegates be referred to the Judicial Council. The motion was laid on the table. Dr. J. Marion Sims, in his Presidential Address, recalled the meeting in 1872 when so much time was wasted in discussing the Negro and woman physician questions. He asserted that "the Association was a truly rep-

<sup>5</sup> For a detailed discussion of smallpox, vaccination, epidemics, etc., see I. D. Rawlings, *The Rise and Fall of Disease in Illinois*, 1927. The State Department of Public Health.—Editor

representative body and that if any state or county medical society should send as a delegate either a woman or a Negro, the Association was bound to receive the delegate.”<sup>6</sup> Dr. Stevenson, perhaps with remarkable wisdom, must have sat peculiarly quiet throughout the session, since her name does not appear as a participant in the making of motions, the offering of resolutions, the discussion of any papers or the presentation of any contribution.

The Secretary of the State Society, on the second day of the meeting, announced that an appeal from action on the part of a county society had been received. Dr. Whitmire stated bluntly: “It seems to me that every local society should have charge of its own members. If we recognize a county society, then the action of the county society in regard to its own members should be final and we should not interfere. We have been bothered with this matter before.”

On the third morning, Dr. Sarah Hackett Stevenson presented her report on the progress of physiology. She may not have spoken during her trying time as the first woman delegate to the American Medical Association, but the members of the Illinois State Medical Society heard her present a carefully prepared report: “a general survey of the present status of the science, and some of the more recent theories with regard to the functions of certain organs.” Careful, meticulous documentation, minute and detailed study gave her courage. After her paper had been referred to the Committee on Publication she said: “I was in hopes that there would be some discussion on some points in my report. I see the Professor of Physiology in Rush Medical College is here. I should like to hear his opinion in regard to these questions. We are all students; and I do not wish you to feel that because I have said these things, I am sensitive about having them disputed.” To which Dr. Freer replied: “I am unable to take any exceptions to the paper. I used to be very happy to find fault if I could. . . .”

Toward the close of the meeting, following almost three full days of scientific deliberations, the Jersey County Medical Society brought before the House a carefully worded request for cooperation from the Society in the establishment of a State Board of Health. Dr. E. W. Grey had prepared a paper dealing with “Facts for the People,” and Dr. Chambers offered the following resolution: “That a Committee be appointed to memorialize the next legislature on the subject of the appointment of a State Board of Health; and that with proper modification, the act by which the Board of Health of Massachusetts was inaugurated be submitted to the same as a basis for the Illinois State Board: RESOLVED, That as members of the State Medical Society, each one shall consider himself bound to urge the

<sup>6</sup> Fishbein, M.: *A History of the American Medical Association*, 1847-1947. Philadelphia, W. B. Saunders Co., 1947.



propriety of a State Board of Health upon the representatives from his district." Approval of this resolution was given shortly before adjournment.

At this time the Society had 292 members, of whom four were women.

Dr. N. S. Davis served again as Secretary.

1877—CHICAGO

The twenty-seventh annual session of the Society was held in the Grand Pacific Hotel in Chicago. The President, Dr. T. D. Fitch, called the meeting to order at 10 A.M., May 15th.

Dr. J. N. Hyde, Chairman of the Committee of Arrangements, prefaced his address by calling the attention of those present to the fact that "we meet together at an hour when there comes to us across the Atlantic the echo of the tread of advancing armies. We assemble at a time when the nations of the Old World are agitated with war and the rumor of war, but we find our own beloved country enjoying the blessings of a profound peace."

However, the peace of the Society itself was disturbed, and it was Dr. Sarah Hackett Stevenson again. In his Presidential Address, Dr. Fitch stated: "Our relation to the American Medical Association has always been of the most pleasant character till the past year, and I am quite sure that no cause of disturbance has ever been given, until the Illinois State Medical Society, through its executive became the leader in a revolution which I hope and believe will be heartily sustained by the Society. It has been a standing rule of this Society for several years, that a delegate to the American Medical Association, being unable to attend, was duly authorized to appoint a substitute from the membership of this Society. In conformity to this rule, our lamented Prof. J. W. Freer, was solicited by myself to appoint as his substitute, Prof. Sarah Hackett Stevenson. Prof. Freer expressed great gratification on being privileged to appoint her as his substitute, and gave the certificate to her accompanied with a very flattering endorsement which I also endorsed as President of your Society. On arriving in Philadelphia, the Committee of Arrangements said that all such cases would be referred to the Judiciary Council. Prof. Stevenson, not desiring to make herself prominent in a contest of the kind, decided not to take the step. . . . After the earnest solicitation of the permanent secretary to register Dr. Stevenson, we tried to find her but could not, and as it was necessary to register before the names were read, Prof. Byford and myself went to the registering committee and gave her name in full and paid her fee. Some of the opposition said that it was underhanded, that had she appeared there in person that they could have recognized her sex—she could not have registered. Her sex was borne in her name and no effort was made to conceal it. On the following day the names were read. . . . When the

Secretary read her name, he read it distinctly and repeated it. A motion was made to refer her name and all other questionable ones to the Judiciary Council. Immediately a motion was made to lay the motion on the table, which was done by a very large majority with great applause. . . . Let us congratulate ourselves that we possess the first woman delegate to the American Medical Association. Some may say that your President transcended his authority in approving and being instrumental in her appointment. In reply I would ask if the rule has not been one of long standing? And if we have a member of this Society ineligible as a delegate?" No action was taken by the Society, but Dr. Stevenson must have felt quietly proud of her fellow-practitioners and the members of her Society.

Apparently the Illinois State Medical Society desired to establish women in medicine firmly and publicly. The Nominating Committee listed both Drs. Harriet Botsford of Chicago and Lucinda Corr of Carlinville as members of the Committee on Diseases of Children, and Dr. Ellen Ingersoll on the Committee on Obstetrics. So Dr. Stevenson's slight figure had passed through the inner door and left it ajar for those early women physicians to follow.

The committee appointed to memorialize the legislature on the subject of establishing a State Board of Health reported. The response to their request in Springfield was general and full of encouragement. The committee had taken before the legislature a bill drawn up to suit the needs of the state and so worded as to avoid objective criticism and needless opposition. They had been assisted by the Committee of the American Medical Association and by other physicians throughout the state who were interested in health problems. Physicians were urged to discuss the matter with their respective representatives. "These instrumentalities were followed up by persistent lobbying, and such explanation and defense of the various items of the bill as could be made on the ground, and the result was very encouraging." The bill, shorn somewhat, had passed the House by a vote of 96 to 37, and was before the Senate on "second reading" with fair prospect of final passage. The appropriation was cut from \$10,000, the amount asked for, to \$5000 for two years. But at least the success of the project was nearly assured, and Illinois was to join the list of states enjoying the protection of a State Department of Public Health.

#### 1878—SPRINGFIELD

The meeting was held this year in Representatives' Hall. Governor Cullom, who came into the hall to listen to Dr. J. L. White's Presidential Address, was invited to the speakers' platform, was introduced to the Society by the Vice-President, Dr. E. P. Cook of Mendota, and spoke briefly, referring to the establishment of the State Board of Health and the opera-

tion of the law to regulate the practice of medicine in Illinois. These two measures were discussed in detail in the President's address. The Board, as finally constituted, consisted of three regular physicians, one homeopath, one eclectic and two non-medical men.

As for the Medical Practice Act, their examinations were "rigid and thorough and cannot fail to have a decided effect in elevating the professional standards." A large percentage of these early physicians failed to procure certificates to practice. Statistics showed that 352 applicants took the examinations, but certificates were issued to only 136. At this time 4456 certificates had been issued in Illinois and, from the best information on hand, 1100 "practitioners" had either quit practice or left the state following the enactment of this legislation.

There were several comments on committee reports; for example: "Put a physician who has never had any ambition for writing essays at the head of a standing committee, and he feels himself constrained to show his appreciation of the honor conferred upon him; he will go into labor and deliver himself of a few pages of grammatical blunders and general absurdities, dished up under the guise of a committee report."

The physician, as a leading citizen in his community, was the subject of several remarks, the first of which is quoted from the President's address: "Assembled as we are in a city made famous by the remains resting within her limits of one who fell a martyr to his country, and whose memory the whole civilized world reveres, and with all around evincing the grandeur of Illinois and tending to remind us of the proud position she occupies in the sisterhood of States, it is to be hoped we may go from this session of our Society inspired not only with fresh zeal in the performance of our professional duties, but also *with a renewed sense of the obligations we are under to discharge faithfully the duties of citizenship*, and with a feeling of gratitude that our lives have fallen in such pleasant places."

Dr. E. L. Holmes, in his report on "Ophthalmology as Related to General Medicine" stated: "Physicians in every town and village should interest themselves in the structure and lighting of school houses, in the form of desks, and should advise teachers to have all possible regard for the welfare of the children under their care in reference to the use and abuse of their eyes."

Dr. N. S. Davis in a "Report on Drugs and Medicines" stated: "There is no more reason why the business of filling the prescriptions of physicians should be connected with the traffic in paints, oils, dye-stuffs, toilet articles, fancy goods and cigars than with other dry goods and groceries. And I think there is no way by which the dispensing of medicines can be made safe, economical, and free from imposition and admixture with every species of proprietary nostrums, but to make it a perfectly separate business."



Much of the economic comment sounds familiar. Dr. B. M. Griffith, Chairman of the Committee on Arrangements, stated: "The political economy of this country is passing through a critical financial trial, and parties, political and otherwise, are shaping their lines to secure the best results from the changes. It yet remains to be seen whether the silver bill, the issue of 4 per cent bonds, economy in government expenditures, the European War, and a rigid reform in the civil service, will be the efficient panacea so much desired to secure prosperity for our people."

#### 1879—LINCOLN

Dr. E. P. Cook of Mendota was President of the Society this year. No particular problem faced the House at this session; scientific reports, a trip through the Asylum for Feeble-Minded Children, two rather important resolutions, and a discussion of the physician as an expert witness in court summarize the highlights of 1879.

Dr. Sarah Hackett Stevenson gave an "excellent presentation" on the "Disorders of the Sympathetic Nervous System" which provoked interesting discussion. She was elected as a delegate to the American Medical Association and was listed in the minutes as "S. H. Stevenson," although she herself continued to sign "Sarah" to her scientific contributions.

The Illinois House asked that all regular medical colleges institute preliminary examinations for students applying for admission to classes, and then to admit only those who had at least a thorough English education. The House also asked that all students should be required to study medicine five years and attend three full sessions of lectures before they were admitted to examination for the degree of Doctor of Medicine. Harvard and the University of Pennsylvania were leading the field in this promotion of high standards for students, and the demand that Rush and other Illinois medical schools do likewise was approved by the House.

The House also went on record as opposing "crowded and unventilated conditions in our public school houses," and passed a resolution that "a committee of three be appointed to memorialize the Legislature at its next session to enact a law establishing a Board of Commissioners of Hygiene in each County in this State whose duty it shall be to inspect all public school houses and see that they are supplied with proper means of ventilation, and are of sufficient size to accommodate the number of pupils in attendance; to inspect all proposed sites and plans for new school houses, and approve or reject the same, and to adopt such measures for the preservation of health in our public schools as from time to time they may think necessary and proper."

In his Presidential Address, Dr. Cook asked for legislative action to amend the law for the commitment of the insane. "While our State stands

in the front rank among the states which have been and are doing most in providing institutions for the care and the treatment of the insane, she stands alone in making some of the conditions for their admission the most barbarous and inhuman, in a law that has in it a relic of the cruelty of the past, and that is a disgrace to the fair name of Illinois. No other state in the world requires this unfortunate class of sufferers to be dragged before a court, like common criminals, and made a public spectacle, that in many instances is shocking to sensibilities that are capable of most acute suffering; and this absolutely required in every case before they can gain admission to an institution."

Humor, too, found its way before the House. Dr. Edmund Andrews, Professor of Surgery at the Chicago Medical College, presented a paper, "The Chiropodists." "They (the chiropodists) readily comprehended that men who propose to live permanently among their patrons must not play tricks; so that permanency begat honesty, and honesty begat respect, and respect stimulated a genuine effort to be worthy of the good will of their fellow citizens. Thus the corn-doctors became chiropodists, and though most of them are still very deficient in education, they are moving upward, and bid fair to establish a specialty as legitimate and as well defined as dentistry. There are five chiropodists in Chicago, and they number among their patrons the best families in the city."

The Committee on Medical Education (Drs. David Prince, E. Ingals and R. G. Bogue) presented a comparison of the educational statistics of different countries which showed the percentage of physicians to the population, as follows:

	<i>Number of Graduates</i>	<i>Ratio to Population</i>
United States . . . . .	3000	1:600
Great Britain . . . . .	1750	1:1700
France . . . . .	750	1:1800
German Empire . . . . .	600	1:3000
Austrian Empire . . . . .	600	1:2500
Italy . . . . .	200	1:2500

In commenting on this situation, the committee stated: "Society disposes of many of the multitudinous progeny annually cast upon it from the fruitful matrices of our numerous medical schools, after short gestations and easy deliveries, by the more slow and painful process of starvation. The people who inhabit the banks of the Ganges are said to rid themselves of overcrowded numbers by drowning them in its waters."

The House elected Dr. Ephraim Ingals, of Chicago, President, listened to Dr. J. H. Hollister present his seventeenth annual report as Treasurer, and went on record as planning to meet in Chicago every third year.

There were 370 members in the Society at this time, and the year closed with a balance in the treasury of \$231.24.

## 1880—BELLEVILLE

The first order of business to come before the House, following the address of welcome and the report of the Committee on Arrangements, was the second resignation of the Permanent Secretary, Dr. N. S. Davis of Chicago. Dr. Davis had served his State Society in many capacities since its reorganization 30 years before; he had contributed scientific papers, kept Society records, entertained the members at his Chicago home, made up financial deficits from his own purse until such time as the Treasurer could reimburse him.

It was at this meeting which received the resignation of Dr. Davis that Dr. Christian Fenger registered for the first time. His name is listed as a member in good standing with his dues paid for 1880. He is listed as "surgeon-pathologist to Cook County Hospital, Chicago." Dr. Fenger took no part in any of the discussions, but the minutes of the May 20th meeting stated that "the paper of Dr. Chr. Fenger and E. W. Lee on Tuberculosis of Joints, was then read at their request by Dr. Norman Bridge, and the patients on whom excision had been performed were exhibited by Drs. Fenger and Lee, showing the favorable result of the operations—one being excision of humerus, radius and ulna; another being excision of the knee joint. The paper was accepted and referred to the Committee on Publication."<sup>7</sup>

Communications received by the House included a request from the Woman's Christian Temperance Union that the Society issue an "expression of opinion." With a rather adept evasion of the issue, the House approved a statement that "while we hold alcohol to be an invaluable therapeutic agent, and would always recommend its use under competent advice, yet no one can more fully realize the injury inflicted by the unadvised and intemperate use of alcoholic drinks than the physician. We would earnestly recommend the exercise of temperance in all things."

The Treasurer had a balance of almost twice that on hand in 1879—a total of \$413.00.

## 1881—CHICAGO

Dr. James Nevins Hyde, Chairman of the Committee on Arrangements, welcomed the members of the Society to Chicago after a four year absence

<sup>7</sup> This was rather a quiet beginning for one of the outstanding men in American medicine. Dr. Christian Fenger was the teacher of such men as Ludvig Hektoen who was winner of the distinguished service medal of the American Medical Association in 1942. He was a close friend of Nicholas Senn, and it was to Fenger that Senn wrote from Europe the letters which later were published under the title "Four Months Among the Surgeons of Europe." Frank Billings was Dr. Fenger's associate for over twenty years, and Drs. William and Charles Mayo spent alternate weekends in Chicago with him. The American Medical Association commented that "Fenger is the highest embodiment of modern surgical pathology." (For further details on Dr. Fenger, and especially on his surgical contributions, the reader is referred to Chapter VIII of this Volume.)—*Editor*



from that city. "When we last had the honor of greeting you in our city, the country was just emerging from that long period of financial depression, whose effects the medical men of our State could not be expected to ignore, either in their opportunities or successes. . . . Now we have reached that plane of living and labor, where accumulated resources put it in the power of the profession to multiply its means of observation and its measures for the relief of sickness and the results of accident. . . . The various hospitals and charities of our city, together with the Academy of Sciences and the Library of the Medical Press Association, will be open to you at all hours of the day and evening during your stay in the city. Also, railroad certificates issued by the Permanent Secretary of the Society are furnished to each delegate from outside the city. They will enable the holder who has paid full rates from any point in the State to Chicago, to return to his home on payment of one-third of full fare."

Many sectional medical societies were still sending delegates to the House: Brainard District Medical Society, Centennial Medical Society, Aesculapian Society of the Wabash Valley; Central District and Central Illinois Medical Societies, Fox River Valley Society, Military Tract Medical Association, North Central Illinois Medical Association, etc.

Dr. George W. Jones of Danville, in his President's annual address, stated: "In each county let there be a well organized, regularly attended medical society, even if composed of no more than five members. . . . Let there be unity of action in the premises and require each applicant for membership in the profession to become the student of the society into which he is admitted upon some settled basis of membership. . . . I have an abiding faith in medicine, my friends, a trust that is growing stronger with each revolution of the seasons."

Dr. M. A. McClelland of Knoxville made a detailed report on the "Legal Regulations of the Practice of Medicine" throughout the United States. In the case of Illinois he listed the following:

"Establishes a Board of Health composed of seven members appointed by the Governor.

"Shall have the general supervision of the interests of the health and life of the citizens. Sanitary investigation, supervision of registration of vital statistics. Shall make annual reports to the Governor regarding vital statistics, diseases, etc. \$5,000.00 being appropriated to defray all expenses, salary of secretary, contingent expenses, printing, etc.

"Practitioners, if graduates, shall present diploma to Board of Health for verification as to genuineness. If so found, a certificate to issue under seal of Board. Fee, if candidate is successful, \$5.00.

"For presenting a fraudulent diploma, Board to collect a fee of \$20.00.

"Diplomas verified by affidavit of holder. Examinations to be of an elementary character. Board may revoke certificates for unprofessional or dishonorable conduct.

"Persons professing to practice medicine or who shall append to his name the letters, M.D., to be considered physicians. Students prescribing under supervision of preceptors, or persons prescribing gratuitously in cases of emergency, exempt. Not applicable to commissioned officers of the U.S. army or navy.

"Itinerant practitioners to pay a license of \$100.00 a month.

"Practitioners to be registered in county or counties where practicing. When removing to another county, certificate to be indorsed to that effect by county clerk; said certificate to be recorded as before provided for.

"Practitioners to file certificate of births and deaths within 30 days. Penalty, \$10.00. Failure to register, fine, not less than \$50.00 nor more than \$500.00, or by imprisonment of not less than 30 nor more than 365 days, or by both fine and imprisonment, for each and every offense; and any person filing or attempting to file, as his own, the diploma or certificate of another, or a forged affidavit of identification, shall be guilty of a felony, and upon conviction shall be subject to such fine and imprisonment as are made and provided for by the statutes of this state for the crime of forgery.

"Board a mixed one, three regular physicians, one homeopath or eclectic and two laymen."

#### 1882—QUINCY

The President of the Society in 1882 was Dr. Robert Boal of Peoria, one of the two men then still living who had met in Springfield in 1850 to reorganize the Illinois State Medical Society. Dr. Boal had practiced his profession for over a half a century, and his President's Address was prepared to "contrast the past with the present, the then and now." The Society was in its 32nd year, and Dr. Boal commented that "A generation of human life has almost passed away since the few earnest and active members of the profession—twelve in number—in the library room of the old capitol in Springfield, organized our present association. To one who has lived through and witnessed it, the marvelous progress that has been made during the past fifty years in population, wealth, in science and the arts, in liberty, law and human rights, in a degree never before known in history, is a subject of unceasing interest and admiration. . . . History contains no record of a people whose progress has been so rapid and marvelous as our own. Then the practice of medicine in all its departments was pursued by the same individual. Now we have specialists in every branch of the science and art of medicine. . . . The amenities of professional intercourse and the obligations of medical men toward each other and the public, were then perhaps better observed than now. . . . Then the doctor, next to the minister, was the trusted friend and counselor of every family to whom he ministered. He shared their joys, soothed their sorrows, and every passing year added to and cemented the attachment and affection between them. Now the doctor is regarded more in the light of a tradesman or mechanic, and is employed from the same considerations that a grocer, tailor, or shoemaker is. The strong ties of gratitude and affection have almost ceased to exist. Relationship is now placed upon a mere commer-

cial basis, and for this the profession is more to blame than the public."

Dr. N. S. Davis of Chicago offered a resolution that "a committee of three be appointed to petition the legislature in favor of a modification or amendment of the present law in relation to the commitment of the insane, as will do away with the necessity of bringing cases of alleged insanity into open court for trial, and substitute therefor provisions more consonant with humanity and more in accordance with the laws of other enlightened countries on the same subject."

Membership in the Society had reached a total of 417, and there was a balance in the treasury of \$855.47.

#### 1883—PEORIA

After the official welcome to the city of Peoria, the various committees of the House reported. The most important report to come up for consideration was presented by Dr. Walter Hay as chairman of the special committee appointed to memorialize the legislature for some modification of the laws governing the commitment of insane persons. The other members of the committee were Drs. William Hill of Bloomington and E. P. Cook of Mendota. These three men had had difficulty during the preceding year in their legislative activity. The members of both houses "fully appreciated the defects of the present system and freely sympathized with the desire for reform but most earnestly dissuaded the Committee from any attempt to introduce the measure during the present session for the following reasons: (1) That any measure emanating from either political party would be regarded as partisan, and would require for its passage the unanimous vote of that party at least, in consequence of the equality in the strength of the two opposing political factions, and (2) that by reason of this equality, a protracted 'deadlock' had already consumed so large a portion of the session that no new matter, outside of the ordinary routine business, would receive consideration."

The committee was continued and was asked to report again at the next session of the House. The men had developed a bill which would provide that the judges of the courts in each judicial district should nominate two physicians in each county best qualified to act as Commissioners of Insanity. These commissioners were then to be appointed by the Governor to serve "in and for each of said counties" for a period of three years. The two commissioners, together with the Judge of the County Court, were to constitute the Board of Commissioners of Insanity. The committee had studied the statutes of other states, together with acts of Parliament, etc., as the basis for the bill which they framed for presentation to the legislature.

The special committee to consider the preparation of biographical



sketches of members of the Society reported. They recommended to the House that the work of the committee be restricted to sketches of deceased members. "The object of the volume, at the end of one-third of a century of Society existence, is to preserve in an accessible form, brief biographies of the members of the Society who have passed away." The committee felt that the work of the founding members and the early physicians engaged in active Society affairs should be preserved for ready reference. There was money in the treasury and the House felt that subscriptions could be solicited from the membership. After the material had been assembled, it was to be submitted to Dr. J. H. Hollister as editor-in-chief who was to edit and publish the volume "at as early a date as practicable and furnished to subscribers or others at actual cost."<sup>8</sup>

After serving as Treasurer for twenty years, Dr. Hollister tendered his resignation to the House, which was accepted "with reluctance." A certified check in the amount of \$779.19 had been turned over to Dr. N. S. Davis prior to the meeting, and was delivered to Dr. Walter Hay, the new Treasurer.

In Dr. Alex T. Darrah's address as President, he discussed the Code of Medical Ethics in detail. Revision of the Code was under consideration by physicians throughout the country, the most important problem being "consultation with irregular practitioners of medicine." It was this portion of the Code which the New York State Society had altered in their own Constitution and By-Laws. As a result, none of the delegates to the American Medical Association House from the State of New York was seated. "New York's hasty action was the subject of adverse criticism throughout the country, and if persisted in, its course can have only the effect of dividing the profession in perhaps the greatest state in the Union. It does seem that if a change was desirable in the Code, the American Medical Association was the place to effect it. New York's greatest fault was in assuming too much. Had it presented the issue where it properly belongs, it would have had the sympathy of very many who are now alienated from them, and might have eventually succeeded in effecting the change desired."

Illinois elected 40 delegates to the American Medical Association House, but gave them no instructions relative to the national problems discussed at the Peoria meeting.

#### 1884—CHICAGO

The annual meeting in 1884 was stormy. The sessions of the House were packed with subjects of a controversial nature. Men were outspoken, and the rulings of the presiding officer were frequent to maintain a smooth

<sup>8</sup> See Page 1 in the Preface to this Volume.—*Editor*

session. One of the most active men on the floor was Dr. David W. Graham of Chicago.<sup>9</sup>

Dr. A. B. Strong reported that the Legislative Committee was working on a proposed amendment to the present anatomical law entitled "An Act to Promote the Science of Medicine and Surgery in the State of Illinois."<sup>10</sup> A copy was to be sent to each physician in the state, together with a personal letter asking for cooperation and that the physician use his personal influence with his representative and senators in behalf of the bill. Under the proposed amendment, it would be mandatory for those having pauper bodies in charge to turn them over to medical colleges and preceptors. In discussing the problem of securing anatomical material, Dr. Cook said: "I hope there will be no serious difficulty in the way of making this change in our laws. Allow me to say that we medical men do not appreciate our importance in relation to legislative matters. Certainly it should not be so for we take no interest in such matters, and ignore those influences that reach to medical legislation. I don't ask that medical men enter the political arena and seek political honors and preferment; but I do ask that we place ourselves in the position of vitally interested parties, representing the welfare of our profession. The politicians regard us as a very important aid in legislative matters. I am confident that the influence of the medical profession can be made of more interest in advancing what legislation we may need than any other class, except those who are so well trained in legislative matters—the attorneys."

There was a balance on hand in the treasury of \$1141.04. A resolution was passed whereby a prize of \$100 was offered by the Society for the best report of "Original Investigations into the Etiology, Pathology and Treatment of Diphtheria," and a second prize of \$100 was offered for the "best tabulated report of not less than ten cases of any form of disease under the professional care of the reporter."

Since there was a great deal of extra work in connection with the office of secretary, as well as with that of treasurer, Dr. S. J. Jones, Permanent Secretary of the Society, asked that each officer be authorized to employ someone to assist him in the clerical work. By appropriate action, the House of Delegates allocated \$50.00 to each officer to be used "as they see fit." A bill for \$50.00 for two years' clerical work by "Mr. Davis" was allowed by the Society.

#### 1885—SPRINGFIELD

The first order of business at the annual meeting was an address by the

<sup>9</sup> Dr. Graham was the father of Dr. Evarts A. Graham of St. Louis, Missouri, winner of the 1950 Distinguished Service Medal of the American Medical Association for his work in thoracic surgery.

<sup>10</sup> For a full presentation of this subject, the reader is referred to Chapter XIX of this Volume.—*Editor*

Governor of Illinois, Hon. R. J. Oglesby. Dr. E. P. Cook of Mendota responded for the Society: "While as a body, we are non-partisans, as citizens we comprehend the necessity of political organization, and accordingly identify ourselves with the political party that champions our views of current public questions involving the prosperity and stability of government. The nature of our pursuits excludes us from active participation in public affairs, but brings us in intimate contact and a closer fellowship with the individual units that constitute the body politic, of which you are the head, than any other class in the community."

The Committee on Arrangements announced that a reception would be given the Illinois State Medical Society by the Governor and his wife at the Executive Mansion on Tuesday evening, and on Wednesday evening receptions were held at the residences of three Springfield physicians. Thus, the social activities during the annual meeting were increasing, and the scientific papers and discussions were growing in number until the three days of the meetings were full from morning to late evening.

A forerunner of the commercial exhibitor was present. Dr. David Prince, of Jacksonville, Chairman of the Committee on Gynecology made his report. "Following his report, Dr. Prince made an extended exhibit of gynecological instruments, furnished from the tables of druggists in attendance." This is the first mention in any of the official minutes of the meetings of the House of "druggists in attendance."

The delegate from the Missouri Medical Society reported that in that state "last year they adopted the rule requiring every member of the association to be a member of some local organization as a pre-requisite to membership in the State Medical Association." Dr. N. S. Davis replied that the Constitution and By-Laws of the Illinois Society had contained such a clause for several years, "that a member of this Society must be a member of a local society, a member and supporter of a local society in the county or district where he resides, as well as a regular graduate in medicine. The reason for this was to encourage the profession to maintain organization at home. There is a great advantage in this, and the same rule also prevails in the A.M.A."

Physicians were urged to report cases of contagious disease to the Board of Health at once. Dr. Rauch of Springfield reported that in a certain locality an attempt had been made to hide the occurrence of 140 cases of smallpox with 27 deaths in six weeks. In consequence of this negligence, several other areas became infected. The Board of Health felt that the first case of any contagious disease should be reported promptly and that instructions should be carried out properly in the care of these cases.

Physicians were asked to urge their legislators in Springfield to support the "anatomical bill" dealing with disposition of bodies "to be buried at public expense."



## 1886—BLOOMINGTON

Routine registration and payment of dues, committee reports, etc., opened the 1886 meeting in Bloomington. There was discussion as to the propriety of meeting in Chicago in 1887, since the American Medical Association planned its next annual meeting in that city a short time later. A change in the method of publishing the transactions was suggested. The President, Dr. William A. Byrd of Quincy, advocated publishing a "journal" instead of the separate annual publications, but the House felt that this was not practical "as yet" and took the matter under advisement.

Dr. E. B. Montgomery of Quincy presented a report of the Committee on Drugs and Medicines which was read by Dr. Byrd in the absence of the young practitioner.<sup>11</sup>

## 1887—CHICAGO

Dr. Elias Wenger of Gilman, first Vice-President of the Society, opened the 1887 meeting in Chicago. The President, Dr. William Thomas Kirk, had died at his home in Atlanta on March 25th, the first time a president of the Society had passed away during his term of office. By official action of the Society, "the President's chair was draped in mourning during the session."

For the first time, world medical associations were reaching into Illinois. Dr. Walter Hay had been made a member of the Finance Committee of the International Medical Congress, which was soliciting contributions from the various medical societies. Dr. Hay stated: "The Michigan Society contributed \$500; Tennessee, \$250; California, \$100; Allegheny County, \$250; Missouri, \$300. I therefore move that the Illinois State Medical Society subscribe \$500 toward paying the expenses of the International Medical Congress." Dr. Moses Gunn amended the motion to appropriate \$750, and the motion was unanimously carried.

The Committee on Promotion of the Organization of Local Medical Societies throughout the state reported that the subject was of such importance that it required the appointment of a committee "under instruction and by authority of the state society to open a correspondence with one or more of the leading members of the profession in each county in the state where no medical societies now exist, and urge upon them the importance of medical organization and representation of the profession of all parts of the state in the State Medical Society."

A resolution was passed "that this society use all its efforts to secure legislation requiring the filling of all offices having medical functions with medical men."

Following the report on obstetrics, Dr. Sarah H. Stevenson reported:

<sup>11</sup> Dr. E. B. Montgomery died on December 8, 1954 at the age of 96.

"After ten years of obstetric practice, I have never lost a case from puerperal fever!" Apparently she not only practiced good medicine, but represented her Society well at the state meetings as well as at sessions of the American Medical Association, as her name still appeared as delegate from time to time.

#### 1888—ROCK ISLAND

Dr. William O. Ensign of Rutland called the 1888 annual meeting to order in Harper's Theater, Rock Island. By noon of the first day they had moved over to the City Council Chambers. The Committee on Arrangements reported to the cold, damp group that "it was impossible to heat the theater at present on account of the heating apparatus in the basement being submerged by the overflow of the river." The morning session adjourned early for the sake of comfort. The same procedure occurred the following day when, "on account of the damp and chilly condition of the hall, the Society adjourned to meet in the Council Chamber."

The Committee on Necrology reported the deaths of Dr. Thomas F. Worrell, past President of the Society; Dr. William A. Byrd, past President and one of the founding members of the Society, and Dr. Moses Gunn of Chicago who had been a brilliant surgeon.

A committee of five was appointed "whose duty it shall be to secure from the Secretary of State a charter for this Society under the law providing for the incorporation of organizations, not for pecuniary profit."

The Society discussed in detail the high tariff on medical and surgical supplies, instruments and appliances and, after much discussion, passed a resolution "that the Illinois State Medical Society would urge upon Congress that in the cause of humanity the import duty should be removed from all medicines, medical and surgical appliances, and from everything used in the treatment or diagnosis of disease." The Secretary was instructed to send a copy of this resolution to the Congressional Committee on Ways and Means and to the Illinois representatives and senators. Dr. Morgan opposed the resolution because he did not feel that the Society was in session as a body of politicians. Dr. D. W. Graham replied: "We do not, as republicans or democrats, express these opinions, but as citizens. I think we as a society, ought to express our opinion on this question, and I, for one, am heartily in favor of the resolution."

#### 1889—JACKSONVILLE

Mr. Richard Yates, son of Illinois's Civil War Governor, welcomed the Society to Jacksonville for their 39th annual meeting. Dr. N. S. Davis, in his response to this welcome, pointed out that the Society was meeting in Jacksonville for the fourth time, and that the city's schools, college and hospitals made it an ideal city for the development of the standards of the

profession and for the education of the young student interested in medicine.

The Committee on Revision of the Constitution and By-Laws suggested the following change: "Any regular reputable physician practicing in the State may become a member of this Society, either by being chosen as delegate from a local society or upon presenting a certificate of good character and reputable practice, signed by the president and secretary of any local society in affiliation with this Society, and the payment of the regular dues. Such persons as become members by certificate shall have all the privileges excepting the right to vote." The Committee pointed out that the Illinois State Medical Society embraced less than 6 per cent of the regular reputable practitioners in the state with a membership of a little over 300 while the Indiana Society had a membership of between 1300 and 1400; also that other states not so populous as Illinois had very much larger societies which exerted a much wider influence, both for the profession and general good than did the Illinois State Medical Society. The Committee contended that the Society had other duties than the reading of scientific papers, namely, to look after the political interests of physicians, "perhaps not as a political body, but it should bring a certain amount of influence to bear on our legislature, to pass laws that are necessary for the protection of the profession as well as the protection of the people." The Committee further pointed out that the Constitution and By-Laws under which the Society was operating had been adopted in Jacksonville in 1875, with very few changes since that time.

It was Dr. Davis's opinion that every state medical society should have for its basis some kind of local organization, and that no man should be allowed to come into the State Society who did not support, encourage and make himself an integral part of the society organization where he lived, whether it was a county or district society. He noted that the membership of the Indiana Society was based upon membership in the local society as a prerequisite for membership in the state society and that "in Massachusetts the state is districted; each district has its representation in the state society, and every man that is a member of a district society, is a member of the state society. So it is with the State Medical Association of New York." Dr. Powell of Collinsville said: "I think there should be a qualification for membership dependent wholly and solely on good standing in local societies, and I do not think there should be any such thing as a permanent member of a State Society." The entire matter was recommended for study and time was given to consider the problem.

Mr. W. S. Phillips, Superintendent of the School for the Blind at Jacksonville, conducted a musical and literary entertainment for the members of the Society, given by the pupils of that institution.



Dr. D. W. Graham, Permanent Secretary of the Society, thought "Jacksonville the best place of all for a meeting, and if one is to be held in the same place every two years, Jacksonville should by all means be selected." He also thought, as did others, that the physicians of the state should use more diligence to acquaint themselves with all the state institutions and the conditions of the pupils and inmates.

#### 1890—CHICAGO

There were many important items before the Society in 1890, one of the most important being the founding and development of the Newberry Library.<sup>12</sup>

Also, the House passed a resolution "that this Society hereby requests the A.M.A., as the largest and most representative organization of medical men in the country, to take the initiative and inaugurate such measures as will secure a creditable medical exhibit at the World's Columbian Exposition to be held in Chicago in 1893. Such an exhibit should represent the history, progress and present status of the medical and allied sciences."

Dr. J. P. Mathews of Carlinville was installed as the new President of the Society.

#### 1891—SPRINGFIELD

The President of the Society opened the 1891 meeting in Springfield and introduced Governor Fifer, who welcomed the physicians to the Capitol. Two years previously the Society had voted to hold its meetings biennially in Springfield because of its central location, "its accessibility to all portions of the State by reason of its admirable railroad facilities, and the fact that it was the capital city of the State." It was also thought that a meeting of the Society in Springfield at the time the legislature was in session would exert a valuable influence upon the legislators and "tend to dispossess them of any ideas they might entertain that legislation asked for by the medical profession of the State was for the purpose of self-aggrandizement, or for any other reason than the public good."

Dr. C. W. Earle called the attention of the Society to the bill before the legislature amending the law for the commitment of the insane. The Society committee had been at work on the bill during the year; it was in good shape and it was "quite possible that it might be passed this term, if we can get what assistance we believe the Society can give." The committee furnished each member with copies of circulars and literature which had been used so each man would know exactly what had been done and what had been incorporated in the proposed law. Dr. Earle stated that "we desire now to have the representatives and senators interviewed by as many

<sup>12</sup> For further details concerning the Newberry Library, the reader is referred to Chapter XXII in this Volume.—*Editor*

members of the Society as possible, and urge that the bill be brought up and passed."

Morgan County Medical Society presented a resolution, which the State Society adopted, to the effect that the minimum requirement for a license to practice medicine in the state should be four years of study and three courses of lectures.

For the first time Sections were listed as part of the annual meeting plan: Medicine; Surgery, Surgical Specialties and Obstetrics; Etiology and State Medicine.<sup>13</sup>

The Society considered again the question of an exhibit at the approaching Columbian Exposition to be held in Chicago. The special committee to review the matter recommended that the Society appoint a committee to consider the question, "to counsel with all the parties who might be affected by, or interested in such an exhibit, and to report in full the results to which they have arrived at the next annual meeting."

Dr. D. W. Graham stated before the Society that "a year or more ago I received a communication asking the Illinois State Medical Society to support the publication known as the INDEX MEDICUS, by becoming an annual subscriber for the same." The price was \$10.00 per year. The Society approved the expenditure and it was decided that the volume should be kept in the State Library in Springfield.

#### 1892—VANDALIA

The transactions for the year 1892 contain the revised Constitution and By-Laws of the Society as prepared during the years 1890-92. Various changes are noted: (1) Members of the State Society lost their standing when they ceased to be members of their local societies; (2) failure to pay dues for three successive years was cause for suspension; (3) new members were admitted at each annual meeting by the Committee on Registration but were subject to action by the Judicial Council "as the Society may direct"; (4) annual meetings were scheduled for the third Tuesday of May to "continue in session three days, or until the business of the meeting shall be completed"; (5) sessions were to be held in the city determined by vote of the Society, provided that "every second meeting shall be held in the city of Springfield, corresponding to the biennial sessions of the legislature"; (6) papers were not to exceed 30 minutes when presented before the entire Society, and (7) officers and constitutional committee members were nominated by a Committee on Nominations.

At this session it was decided that an order of procedure should be pre-

<sup>13</sup> It should be noted that the term "state medicine" at this early period referred to public health matters rather than to the interpretation which we have come to place upon this expression.

pared and, if the material warranted, "one or more Sections might be in session at the same hour" but this was to be avoided, if possible.

The Society passed a resolution that "the Illinois State Medical Society makes a special request of the Congress of the United States to pass a bill creating a cabinet officer of public health."

Following the address given by the President, Dr. Charles C. Hunt of Dixon, the Society asked that several suggestions presented in his remarks be considered: (1) that a new Committee on Medical Legislation be instructed to use every resource within its power to secure during the forthcoming session of the legislature, such modifications of the law for the commitment of the insane of the state; (2) that the Society endorse the plan and the objectives of the Pan-American Medical Congress and ask individual members to give such aid and encouragement as opportunity might afford, and (3) that the Society refer the suggestions relating to the Columbian Exposition to the Executive Committee with power to take such action as might be appropriate at any time before the next annual meeting.

#### 1893—CHICAGO

The year 1893 was headlined in Chicago by the Columbian Exposition, so it was logical that the State Society would meet there to give the physicians an opportunity to attend both the scientific and business sessions of the Society and the Fair. There is no mention in the transactions of any medical exhibit, although at the 1892 meeting the members had considered such an exhibit and went on record recommending participation with the American Medical Association. No report was made to the Society regarding this recommendation.

The Committee on Legislation reported that their activities for the year had been concentrated along several lines "for the revision of the law for the commitment of the insane, to enlarge the state institutions for the accommodation of the 5000 mental aliens in Illinois who were still unprovided for; the Medical Practice Act; An act to prevent or control the sale of nostrums; the inspection of milk; medical expert testimony, and other hygienic measures."<sup>14</sup>

Future activities were outlined by resolutions: "That we, the members of the Illinois State Medical Society, and citizens of the State of Illinois, take this occasion to express our earnest conviction that the Superintendents and employees of all State Institutions should be selected because of individual fitness for the respective places, without regard to their political opinions, and that when so engaged the tenure of their employment should depend only upon the faithful performance of their duties to the State."

<sup>14</sup> The bill relative to the commitment of the insane was passed, after years of work in Springfield.



Another resolution stated that "we believe that the sanitary interests of the people of the United States can best be served through a Department of Public Health, with an enlightened and responsible head, and that we as an organization and in our individual capacity will, at all times, use all proper means in our power to cause Congress to enact a suitable law or laws for the accomplishment of this object."

For the first time in the history of the Society, mention is made of income from commercial exhibitions at a state meeting. Dr. E. Ingals, Chairman of the Committee on Arrangements, reported in detail that "the entire expense of the meeting has been \$175.00. We have received from exhibitors \$144.25, leaving \$30.75 to be paid out of our Treasury to cover the expenses of the meeting." No mention is made relative to the names of the firms which exhibited in 1893, and no mention is made of the products shown to the 450 physicians in attendance at this annual meeting.

The list of delegates to the American Medical Association contained names well known in Illinois medicine: Frank Billings, N. S. Davis, D. W. Graham, John B. Hamilton, Frank P. Norbury, Nicholas Senn, W. H. Veach, J. F. Percy, etc.

The Society was growing. For the first time in its history the supply of published copies of the transactions was exhausted before the next annual meeting; 400 copies had been printed at a cost of \$590.47.

The Newberry Library had by this time developed its medical department. Dr. E. Fletcher Ingals, in his Presidential Address before the Society, reported that "in this library all the books we need will be provided if we ask for them intelligently. I am informed by Dr. G. E. Wire, Superintendent of the Medical Department, that there are already in the library thousands of unbound monographs and pamphlets too numerous to number, and over 10,000 bound volumes."

In a scientific paper, Dr. Nicholas Senn summed up the general feeling of the profession when he opened his paper by saying: "We live in an age of great unrest in medical literature. Books written only yesterday are old today."

#### 1894—DECATUR

The President of the Executive Committee reported at the first session of the 1894 meeting in Decatur that "the program for the session was prepared and a copy mailed to all members of the Society." The agenda was packed with scientific papers and economic problems; the interests of the members were going far afield, and local, state and national activities were crowding for discussion and consideration.

The number of Assistant Surgeons in the Army was to be reduced "below 90," and the Society considered that such a reduction in medical personnel would "impede the administration of the army medical department and

greatly interfere with the continuance of the high standard of proficiency that has heretofore characterized that department." The members were asked to protest this action earnestly, and to urge the representatives and senators from Illinois to prevent the enactment of this bill.

Dr. Victor C. Vaughan of Ann Arbor, Michigan, presented a paper on "Nucleins and Nuclein Therapy"; this was the first scientific paper to be given by an out of state physician.

During the previous year, the Legislative Committee had spent \$129.48 more than the \$200.00 appropriation given to them by the Society for its work. The President of the Society, Dr. O. B. Will of Peoria, had secured pledges to the full amount from several members of the Society, including himself, to cover this expenditure. By official action, the indebtedness of the committee was approved and the bill was authorized for payment.

The Society approved the establishment of an epileptic colony "since such a colony is deemed so humane, practical and necessary" and referred the matter to the Legislative Committee for presentation in Springfield.

The Society requested the Illinois senators and representatives in Congress to "use all means in their power to secure the passage of the American Medical Association bill for the establishment of a Department of Public Health, with a competent medical man as the head thereof."

A resolution was passed to endorse and commend the efforts being made by the Illinois State Board of Charities to secure appropriate legislation relative to the prevention of blindness due to ophthalmia of the newborn.

The Committee on Medical Education presented a detailed report requesting uniformity to place American medical degrees upon a firm foundation. At this time no degree from any American school legally entitled its possessor to practice medicine in any of the countries of Europe, but nearly all European degrees were recognized in America as entitling their holders to practice under protection of the law. For twenty years, Ontario had had a plan in operation which was suggested as a possible solution: (1) Each candidate for a medical degree had submitted to him exactly the same set of questions; (2) the identity of the candidate was not known to the examiner; (3) the examining body was distinct from any teaching body. An act was outlined to establish "a State College of Examiners in Medicine and Surgery" for Illinois, and a committee was appointed to cooperate with the standing Committee on Legislation in order to bring this important matter before the state legislature.

The Committee on Information gave a detailed report on the importance and value of universal vaccination for smallpox, together with tables based upon epidemics in Europe from 1780 to date.

This same committee stated: "We cannot urge too strongly upon the profession that prescriptions containing cocaine, which may be repeated,

should never be given, and it should be considered criminal malpractice to place this drug in the hands of the laity for unrestricted use.

Dr. Brower of Chicago, President-Elect, noted that in the State of Illinois there were 6,000 doctors but that membership in the Society was held by only 600. He urged all members to do everything possible to organize active medical societies in their counties and to increase the membership to include all ethical practitioners of medicine.

#### 1895—SPRINGFIELD

The still-young Illinois State Medical Society could not wait for its 50th annual meeting to observe an anniversary of note. The 45th annual meeting was set for Springfield, the city where the founding fathers met in 1850 and laid the ground work for the Society as it still exists today.

For the first time in the history of the Society, the wives of the members were invited to "the first annual dinner given at the Leland Hotel, Wednesday Evening, for the members of the Society and their ladies." It was a long evening; Dr. E. P. Cook of Mendota, toastmaster, rapped for order shortly after ten o'clock. Dr. John B. Hamilton, Secretary, introduced "not only one of the founders of this Society, but at all times, one of its most brilliant ornaments, Dr. Robert Boal of Lacon." Dr. Hamilton also spoke of Dr. William H. Bissel of St. Clair County, once Governor of the State of Illinois, and of Dr. Nathan Smith Davis, a founding father of the Illinois State Medical Society as well as of the American Medical Association, and President of the International Medical Congress. He impressed upon the minds of the men and women present the power and ability of men in Illinois medicine in the past and also in the busy days of 1895.

Then Mrs. Firebaugh was to speak about the part in a physician's life played by his wife. In introducing her as the first woman to so address the Society, Dr. Cook stated that "a doctor is but half a doctor who has not a wife." Among other things Mrs. Firebaugh said: "We have sometimes had our suspicions that less heroic measures may have been tried out upon us for the good of humanity," and, "Ah, we might many a tale unfold of many, many things, if we were right sure that no reporter had 'got mixed in with the boys.'"

Dr. John L. White of Bloomington, a member of the House of Representatives from McLean County, responded to the toast "The Medical Statesman" as follows: "Typical medical statesmanship or medical legislation, I think was exemplified in the bill which today passed the House, and only awaits the signature of the Governor to become a law; a bill which, if it fulfills its promises, will prevent a large proportion of the blindness with which today our State is cursed, and will lessen the expense of the care of the blind to the State about one-third. . . . We have in the House at present,



four representatives of our profession. We differ politically, but we have ever been ready to act as a unit whenever any question involving the honor or integrity of the profession, or the physical wellbeing of the people was brought forward, and I think that we as doctors, after a while, will be able to leave small traces of our footsteps in the sands of legislation."

Then the toastmaster called upon Dr. Sarah Hackett Stevenson who spoke of the future and of "my hobby which is co-education of the sexes in medicine. . . . When the State University is organized, I hope the men and women will be educated in one institution—educated as physicians without any regard to the sex question at all. It seems to me, if we be physicians, that the first necessity is equality of opportunity, and that is all the woman physician asks."

After several other toasts, Governor John P. Altgeld was introduced. The high spot in his short address, delivered late at night, might well have been his statement about the state he served as Governor: "There is not a little thing in the State, unless it is the size of the Democratic majority of the last election."

The problem of membership received serious consideration. Prior to the meeting, 7000 announcements were mailed out to all "regular physicians with an appeal to the medical profession of the State to become members." At the meeting, the President reported in detail on the various activities to secure additional county and city societies and to increase the membership of existing component groups. A circular letter had been mailed to all physicians, and Dr. D. R. Brower reported that "twenty or more county or city medical societies have been organized since that circular was issued, and I trust we may see the result in an increased registration at this meeting. I hope it has been the means of exciting additional interest. It is certainly not a gratifying state of affairs to know that Illinois, one of the greatest commonwealths in the Union, has one of the most insignificant state medical societies."

The physicians present were interested in the history of the Society and a comprehensive and complete summary of the founding days was presented.<sup>15</sup>

#### 1896—OTTAWA

At the 1896 meeting, three very famous "J.B.'s" presented scientific papers: Dr. John B. Murphy on "Surgery of the Gasserian Ganglion with Demonstration," Dr. James B. Herrick on "Thyroid Therapy," and Dr. Joseph B. DeLee on "Craniotomy on the Dead Child."

<sup>15</sup> Reference to the minutes of this meeting will give the historically minded reader information secured from physicians who were present in Springfield in May, 1850, when the Society came into being. A wealth of historical and biographic material is recorded as an accurate and interesting report to those members in attendance at the 45th annual meeting.

An open fight developed on the floor of the House following a request that \$200.00 be allocated for the Committee on Medical Legislation. The committee anticipated a heavy year in Springfield and the President, Dr. D. W. Graham of Chicago, asked that this amount be placed at the disposal of the committee to pay its expenses or as much as would be necessary. Following open and sharp discussion, the request was granted.

Dr. E. J. Brown, Chairman of the Committee on Medical Societies, presented some interesting statistics: Of the 6,051 regular physicians in the State of Illinois, 3,067 (about 50 per cent) were members of either county, district or city medical societies as follows:

County societies . . .	810 members
City societies . . .	1236 members
District societies . . .	1021 members

He further pointed out that of the 6,051 physicians in Illinois, only 632 belonged to the State Society in the year 1896, which was less than 11 per cent of the total number.

A resolution was passed that the Society put forth "most earnest efforts to assist in the prevention of the spread and for the stamping out of existing cases of bovine tuberculosis, and most earnestly insist upon the passage of such laws by the State that the above objects may be accomplished."

The address of the President asked for reform in the Coroner Law. Most of the concentrated effort of the men present was legal in nature, and the work of the Society reflected the growth and progress developing in science and legal public health matters at the turn of the century.

#### 1897—EAST ST. LOUIS

For the first, and so far as is known the only, time in its history, the Illinois State Medical Society joined with another state society to hold its annual meeting. The Illinois physicians in attendance at the 1897 meeting, went to St. Louis on May 19th to join the Missouri physicians in their meeting, held at the Century Theater. Then the Illinois physicians welcomed the members of the Missouri Society at an evening session on Tuesday at the McCasland Opera House in East St. Louis. Expenses were shared by the two societies.

The Committee on Medical Legislation reported for the first time that an Osteopathic Bill had been introduced before the legislature. Senator Granger of Chicago introduced the bill which met with no opposition. Dr. J. W. Pettit of Ottawa stated: "While our bill has been treated with contumely and contempt, a bill has passed the Senate unanimously and will almost certainly pass the House, exempting so-called Osteopaths from the provisions of our present Medical Practice Act. The practical effect of this bill, if it becomes law, will be to annul the present Medical Practice Act in

so far as it has any effect in preventing quackery, leaving the profession and the public without any legal regulation or protection." Dr. G. N. Kreider stated: "I do not think we ought to allow the legislature to pass the Osteopath Bill (S.B. 297) without a protest from the Illinois State Medical Society. I think it would be wise to have a committee appointed to report this afternoon in the form of a resolution expressing the outrage this Society feels." Dr. Pettit continued: "I will say that this bill was introduced by Senator Granger who is a nice, pleasant old gentleman. I had a long conversation with him a few weeks ago, and found that he was urging the passage of this bill, and that he is really the man who is behind it in the Senate, not because he cares anything for so-called Osteopaths, but because he is a Christian Scientist, and the passage of the Osteopath Bill will open up the way for something else, and it is simply an outside skirmish line that has been thrown out to break down the Medical Practice Act. If this bill is passed, something else will follow."

The following resolution was adopted by official action: "RESOLVED, That it is the opinion of the Illinois State Medical Society in convention assembled, that the laws governing medical practice in the State of Illinois should apply with equal force to all persons engaged in the healing art, and that no discrimination should be made in favor of any school of practice. Furthermore, we wish particularly to enter our emphatic protest against the enactment of Senate Bill 297."

Dr. John B. Hamilton said: "Let us reflect that we have two ways to be heard in the legislature—one is to make sure that we send friends to represent us in that body, and the other is to send physicians to the legislature and to Congress. . . . Shall the physician go into politics? I say yes, if he can personally afford it and is of ripe experience. We may never hope to have correct medical legislation until we are either properly represented in the law-making bodies, or the community in general shall have elementary knowledge of medicine. No sincere patriot need ever fear in this country to speak his political sentiments or to speak openly in defense of his principles so long as he is governed by pure and patriotic motives, by love of right, and by affection for his country and its flag. . . . Dr. Joseph Warren made 'incendiary' speeches on Boston Common and fought in the line at Bunker Hill. Dr. Benjamin Rush was one of the Continental Congress and signer of the Declaration of Independence. Put medical men endowed with noble independence in our legislature and in the Halls of Congress . . . they would consider the general welfare as above every earthly consideration. . . . The acts of the members of our profession in the Iowa Legislature have demonstrated to the world the wisdom of the electors who sent them there." <sup>16</sup>

<sup>16</sup> In Iowa, the Osteopathy Bill was promptly defeated. They had 12 physicians in the Senate of that state and about half that many in the House.



1898—GALESBURG

The Society met in the Knox County Court House to open the 1898 meeting, and was welcomed to Galesburg by the Mayor and city officials. The Mayor was familiar with many of the "medical celebrities in the great State of Illinois." He spoke eloquently: "Where shall we place upon the medical roll of fame of the world the names of Senn, of Murphy, of Davis, of Fenger, of Klebs, of Byford, and many others whose names are worthy to be mentioned, and who are entitled to be called the Darwins and the Tyndalls of the western hemisphere; and with our medical institutions, such as Rush Medical College, the College of Physicians and Surgeons, the Woman's Medical School, and other institutions of like importance."

Dr. Nicholas Senn wired his regrets that his personal practice kept him from attending. This was a keen disappointment to the physicians assembled, since he had been scheduled to present the Address on Surgery.

The Osteopathic Bill, which passed both Houses of the State Legislature, was defeated "by virtue of the veto of the Governor."

Legislative problems closed in on all sides. "When the present medical practice act went into operation there were only five medical colleges in the State, now there are twenty-five, and they may be classified as we did the verbs, when I was a boy, as regular, irregular and defective," stated the Chairman of the Legislative Committee.

Doctors were not to be classified as expert witnesses under the law, and this controversy was extremely "hot," as may be noted from the papers presented at this meeting: "Summary of Laws Governing Expert Testimony in Other States" by Dr. J. O. DeCourcy; "Defects of Laws Governing Expert Testimony in Illinois" by Dr. Sanger Brown; "Expert Testimony" by Dr. Frank P. Norbury; "Personal Experience with the Dixon Decision" by Dr. Denslow Lewis, and "Expert Testimony: Suggestions for the Outlines of a Law" by Dr. D. W. Graham.

Progress was being made in organizing medical societies throughout the state. In 1898, sixteen medical societies came into being. Eight were organized in Gallatin, Fulton, White, McDonough, Warren, Vermilion and Hardin Counties, and work was going forward in Pope, Hamilton and Pulaski Counties. Other groups which were recognized were the Clinical Association of Champaign and Urbana, Neurological Society of Chicago, Society of Internal Medicine of Chicago, Physicians Club of Chicago, Society of Medical Examiners of Chicago, Quincy Medical and Library Association, Chicago Orthopedic Society, East St. Louis Medical Society. At this time, 37 counties were organized, 20 city medical groups had recognition, and 15 district medical societies sent representatives.

The Society was working diligently to develop a new medical practice

act, and Dr. Pettit of Ottawa presented in detail the proposed material to be presented in Springfield. After reading the Act he stated: "Unless it can be clearly shown that such a law is in the interest of the public, it will not stand the test of a judicial decision, as the Constitution expressly prohibits class legislation. Whatever advantages may accrue to the profession by such a law, must be incidental to the public good. This principle of protection to the public must constantly be kept in view and any departure from it will nullify any law we may succeed in having enacted."

The Committee asked for "not less than \$2,500" to carry out this work—a far cry from the contested \$200 requested a few years previously. Dr. Pettit stated that "Of this, the regular physicians will be expected to raise \$1,100.00 which will be about 50 cents per capita for the members of the various medical organizations of the state."

The Society approved "an excursion to the International Medical Congress to be held in Paris in 1900 to be known as the Illinois State Medical Society European Excursion."

Dr. A. C. Corr, as Chairman of the Illinois delegates to the American Medical Association, reported that Illinois had pledged \$2,000 to the Rush Monument Fund at the Philadelphia meeting. Drs. Murphy, Senn, Hamilton and others had prevailed upon him to authorize this amount; Ohio and other states had pledged similar amounts, and Dr. Corr wanted his action in Philadelphia approved by official motion. The amount was to be raised by "pro rata subscriptions." The action on the part of the Society's delegates was secured by the necessary motion, and the amount became an official debt of the Society.

Prior to adjournment, the 1899 meeting of the Society was set for Cairo "the third Tuesday in May, 1899."

The year 1899 begins a new era in the history of the Illinois State Medical Society, for at that time the *Illinois Medical Journal* was established and became the official organ of the Society.

## CHAPTER V

# THE RISE OF MEDICAL SPECIALISM

By DAVID J. DAVIS, M.D.

THE most characteristic feature of medicine in Illinois during the period 1850 to 1900 was the gradual rise and evolution of the modern specialties. The main reason for this emergence was the progress that was occurring at that time in the basic sciences throughout the western world. Technologic methods, discovered and used in clinics and laboratories, were brought to bear upon the solution of the problems of disease in a multiplicity of ways. These advances, as they were applied during this half century, were to change fundamentally the practice of medicine in its every respect.

It is largely on this account that the plan of approach in this second volume of "The History of Medical Practice in Illinois" is altogether different from that of Volume I. There was related chiefly what the doctor did in his daily work among his patients as they came to him and he went to them. As their ailments were presented to him, he did the best he could with little or no regard to specialization. With differential diagnosis in its infancy, it was inevitable that many different diseases with a few symptoms in common, fevers for example, were grouped together and all were given the same treatment, regardless of their true nature.

Furthermore, Volume I of this series is based largely on an orderly regional or county plan, with both the physicians and the people in the various communities telling in a general way and by personal accounts what had transpired in medicine. The entire state in this way was fairly adequately covered. Little variation existed in the experiences which resulted from differences in disease distribution in various parts of the state. Fevers, especially malaria, were common, as were tuberculosis, contagious diseases, diarrheas, dysentery, cancer, pneumonias, bronchial troubles, wounds, local infections, abscesses, injuries of many kinds but especially fractures, complications of childbirth, and diseases of the eye, ear, throat and skin. Poisonings by snake bite, poison ivy, white snake root (milk sickness) and a few other conditions were less common. Any or all of the above afflictions could appear in a busy doctor's office almost any day, requiring and usually receiving prompt personal attention from the doctor himself. At that time the profession included the greatly revered family physicians, who as general practitioners, rendered an indispensable service



to the people, a service which during those years could not have been obtained in any other way. In both the rural areas and the smaller communities, this type of general service has persisted to this day and, though receding, no doubt will continue for many years to come.

But at approximately the midcentury mark, this general plan of procedure, both for the doctor and the patient, slowly but surely commenced to change, the change beginning primarily in the large cities and in the medical schools. The inexorable law of specialization began to manifest itself in almost everything that was being done by the physicians as well as by the people in the home, on the farm, in industry, etc. The trend toward specialization was very gradual. Though it increased at an accelerating rate, even after fifty years there still existed many competent doctors who managed and treated their patients, in principle, as they had done in pioneer days.

As already intimated, it was this specialization in medicine which began about 1850 that has made it seem advisable to alter the plan, carried out in Volume I, to one that is based on the rise and development of the several specialties. This latter plan seemed to demand that the presentation of the specialties be allotted to experts qualified in their respective fields. This has been done. These experts for the most part are or have been experienced teachers as well as practitioners. They have thus become familiar with the historical approach to their subjects and have acquired a thorough knowledge of medicine based upon long training and practice.

#### PRIMITIVE SPECIALISM

The first specialists in medicine in the Illinois country appeared among the Indians, primitive and crude as they were. Medical specialization grew out of the division of labor—a general practice carried on by all races of human beings who enter into the usual relations incident to the art of living. Since man is by nature a gregarious animal, this way of life is one of his basic characteristics.

When the white man first came to Illinois, the American Indians, already there in large numbers, were still living in the Stone Age. Division of labor even then was clearly evident in their everyday life. The men did the hunting, fishing and fighting. The women made clothes and tepees, cooked the food, cut the wood, raised the crops and carried on all the menial labor about the camps. Naturally in such a system, certain individuals become more expert than others in performing these activities.

Most matters having to do with health and disease, even in the earliest tribes known, were in the hands of special groups called medicine men. Living largely in a demon or spirit world, the Indians believed that disease resulted from the operation of spirits either within or without the body.

The medicine men or priests who dealt with religious beliefs were not clearly differentiated from other members of the tribe, and often they were identical individuals. For the most part, these groups were fakirs, witches, charlatans and magicians who practiced the "tricks of their trade" on the sick by presuming to cast out the evil spirits.

In addition to these "spirit men," there were other specialists in this field. A large number were the so-called "herbalists," who devoted their time to wandering through the forests and fields, collecting herbs which in the form of decoctions or extracts were used or tested upon themselves or the sick. Many of them acquired an uncanny knowledge of herbs of all kinds. These became their "materia medica." The men and women who found and prepared these products sometimes became a group apart. They were looked up to at times with an august respect, or again with fear.

Another group that often became differentiated more or less clearly from the rank and file were the midwives and those persons dealing with the special diseases of women. In some Indian tribes this specialty was conducted in a private manner and often in separate huts. The patient at times was left entirely alone to manage her own labor as best she could and administer whatever therapy the crude Indian practices required.<sup>1</sup>

Still another specialty was physiotherapy, particularly treatment with hot and cold baths and with the salt waters and springs that were widely distributed in this territory. In the United States there are some 2,000 mineral springs, many of which have hot or warm chemical waters. The Illini country is well supplied with all these waters. At such places, the natives congregated for sweat baths, massage, purging and other treatments. Here, too, animals came in large numbers attracted by the salt, thus becoming an easy prey for the Indians. These localities became the sites of some of our early settlements and cities, Danville for example.

Among the Indians, surgery in an indefinite way was early differentiated from the more general medical practices. Thus arose groups of specialized practitioners of which the bone setters, bleeders and those who trephined skulls are examples.<sup>2</sup> During times of war, which for many tribes was an almost continuous engagement, the care of wounds and injuries became a special assignment for these primitive surgeons.

Crude as their medical methods seem to us today, they were no more so than were their efforts in other lines of activity. The Indians took their medical work seriously, with the result that this particular art played a significant rôle in their lives in many ways. In general, it existed as a universal institution among all the Indian tribes in this country.

<sup>1</sup> For a more detailed account of this specialty in Indian tribes, see Chapter IX in this Volume.

<sup>2</sup> Moodie, R. L.: *Paleopathology*. Urbana, Ill., University of Illinois Press, 1923.

The above statements regarding Indian medical specialization are here set forth with the idea that they may furnish a basic, even though crude and inadequate, introduction to the rise of our modern specialties. The underlying principles of evolution and progress are identical in both.

#### MODERN SPECIALISM

In order to understand the early development of modern specialism in a limited region such as Illinois, it is necessary to refer to earlier times and to earlier countries for a historical approach to the subject. Such an approach furnishes dependable guiding principles to follow.

The beginnings of specialism in medicine among civilized peoples arose far back in ancient times. Those who first limited their work to special organs, like the eye (code of Hammurabi) or the ear, seem to have been, in principle at least, the initiators. The recognition of surgical practice as a field to some degree different from general medicine is also ancient. Both were to a variable extent differentiated long before the days of Greece or even of Egypt. Ethnology bears this out. The discovery of surgical instruments in the modern excavations of ancient civilizations also indicates that surgery is very old, perhaps the oldest of all medical procedures. This is on the assumption that childbirth was considered, until relatively recent times, a physiologic process comparable in some respects to other normal evacuation processes of the body. It was therefore natural that medicine and surgery—even the barber surgery—together with some of the organ specialties having originated so long ago, continued down through the centuries side by side, as it were, until the advent of the scientific specialism of today.

Progress in medicine has been achieved by discoveries made at intervals in the different countries of the world. Depending on the nature of these discoveries, a period of time ensues before the concrete discovery becomes available for practical purposes. This "lag"<sup>3</sup> period depends upon several factors, the two chief ones being: (1) transmission of information, usually by printing, and (2) training of competent persons to carry on the technologic procedures. The length of this period varies from a relatively short time to many years, during which the technics are perfected and, as a rule, new and valuable observations are made leading to further advancement. As Bacon has written: "This Art of Discovery hath two parts, for either the Indication is made from Experiments to Experiments; or from Experiments to Axioms, which may likewise design new Experiments."<sup>4</sup>

In a relatively primitive country such as Illinois was during the years 1850 to 1900, one could hardly anticipate great discoveries of a fundamental

<sup>3</sup> "Lag" has been defined as that unpredictable period between the discovery and the pay-off.

<sup>4</sup> Francis Bacon: *Advancement of Learning*.



nature. And, as a matter of fact, no major discoveries have been recorded in Illinois during this period. Our interest, therefore, will lie in noting the early application of principles, together with the technical improvements that naturally occur during subsequent periods of extension and dispersion.

For example, on page 223 of Volume I of this series, Zeuch tells of the first anesthetic given to a patient in Illinois. This occurred in 1846 in the amphitheater of Rush Medical College where Dr. Charles H. Quinlan gave ether in a case of amputation of a finger. It is remarkable that this date was only four years after Dr. Long first used ether in Georgia for the removal of a tumor, two years after Dr. Jackson and Dr. Morton used it in pulling a tooth in 1844, and one year *before* Dr. Simpson in 1847, used chloroform in childbirth cases in Edinburgh, Scotland. One must admit that for that day the transmission of information was surely a remarkable accomplishment. Dr. Quinlan—and there were many like him—must have been on the alert for the latest and best in medicine.

The discovery of practical anesthesia and its relatively rapid application were most timely in view of its usefulness during the Civil War which was to follow so shortly thereafter. This is also true of the discoveries in antiseptic surgery during the half-century under consideration.

Roentgen's discovery of the x-ray in 1895 further illustrates how rapidly knowledge of advances in medicine was dispersed. In a surprisingly brief time, the news of this discovery encircled the world, and in Illinois within the same year, Dr. Michael Hewitt of Galesburg was able to obtain an excellent skiagraph of Dr. Thomas Shastid's hand. Dr. Shastid thought this was the first x-ray picture taken in the Western Hemisphere.<sup>5</sup> Progress in the use of x-ray was rapid for the examination of bones and other dense tissues or parts of the body. Its use for treatment of disease, while somewhat more retarded, was progressive and has continued from time to time to excite the world with new observations and technics.

Mention should be made of the fact that the nature and incidence of disease in a given region are certain to have an influence on the rapidity and trends of medical specialization. Where fevers occur, there febrifuges will be used and studied. In a pioneer period, wounds, fractures and local infections will require surgery. In Illinois specifically, the trachoma area occurring in the southern part of the state has required the services of eye doctors for many years. Such experiences surely will encourage a few doctors to become more or less expert in some branch of medicine; in other words, they become specialists to a greater or less degree during the natural course of events.

The rise of the specialties a century ago was not altogether a popular

<sup>5</sup> Shastid, Thomas H.: *My Second Life*. George Wahr, publisher, Ann Arbor, Michigan. 1944. 32 p.

trend either with the physicians or with certain elements of the public. In the minds of many, it was degrading to the better class of practitioners. This is clearly indicated by the action of the American Medical Association at its general meeting in 1869, nearly twenty years after it was founded, when the following resolution was adopted: "Resolved that this Association recognizes specialties as proper and legitimate fields of practice." This declaration may be considered as the official beginning—a green light, as it were—for the era of specialism in this country. Much, of course, had been accomplished before this date to justify this recognition by the American Medical Association. For example, the Civil War, furnishing for study a great variety of diseases *en masse*, was an encouragement to doctors to devote their time and efforts to a limited group of diseases or even to one disease. War has always tended to do this, as we now well know from our own later experiences.

Also during this period many basic discoveries were being made: Virchow in 1859 published his cellular pathology. Shortly thereafter Pasteur announced his great work on bacteria, and Lord Lister was soon to apply these basic facts to medicine and especially to surgery. These and many more revelations and technical inventions were bound to result in time in the use of special methods in every field.

One may cite still other and more immediate reasons for the rise of specialism in Illinois during the last century. Occasionally a general physician would inform the community that he was especially prepared to treat diseases of a certain class or group, eye diseases for example. Publicity was given to the people in various ways: by personal contacts, by the name of the specialty inscribed under the physician's name at his office, by notices or advertisements in the newspapers or in other public sheets. The early issues of our newspapers often reveal illustrations of such publicity methods. These doctors, whether quacks, regulars or homeopaths, continued to carry on their general practice while thus promoting their favored specialty.

#### SPECIAL INSTITUTIONS AND PUBLICATIONS

Institutions for special diseases had an important influence in promoting specialism. In the founding of mental hospitals, many alert general doctors became well trained psychiatrists for their day. In Illinois the first Hospital for the Insane was erected at Jacksonville as early as 1851.

In such institutions, in general hospitals and in medical colleges there soon appeared medical papers of value. This encouraged the early beginning of both special medical societies and special medical journals. The first specialty publication in Illinois was the *Journal of Nervous and Mental Diseases*, founded in 1874 by Drs. J. S. Jewell and H. M. Bannister, both of whom had been interested in these diseases for years. In fact, Dr. Jewell

may be said to have also founded the American Neurological Association in 1875.

To illustrate further the advance of specialism in Illinois, Dr. E. L. Holmes founded the Illinois Eye and Ear Infirmary in Chicago in 1858. Soon he and his associates became active in publishing papers in the general medical journals long before the advent of special publications in this field.

The American Medical Association and the Illinois State Medical Society, both permanently founded in mid-century, continued for years to publish both special and general papers in the columns of their official publications. Almost from the beginning, committees for the specialties were appointed at the annual meetings of these organizations to promote their activities and to arrange for the programs of the specialties. Later, special sections were created. The early numbers of the transactions of these societies cover adequately the specialty literature of that day and, as source material, are invaluable.

To understand further the rise and progress of the specialties during this half century (1850 to 1900), it may be helpful to set forth in more popular fashion the status of medical practice at the very beginning of this period. One of the most lucid statements suitable for our purpose was written just before the Civil War by a writer of note, Dr. T. L. Nichols, who had travelled widely over the entire region east of the Mississippi River during that early period. Following is a series of his pertinent comments about medicine in this region, given in substance or in his own words:<sup>6</sup>

The medical profession in America bears the evils of haste and irregularity incident to so many of its institutions. It is a country of many and violent diseases. Large portions of the newly settled country, and some of the oldest as well, are full of the malaria that causes intermittent fever. In the West and Southwest there are in swamp and bottom lands worse malaria, causing violent bilious fevers. The cities and villages of the South, unless guarded by rigid quarantine, are subject to yellow fever—the terrible vomito of the West Indies and Mexico. The North, with its cold winters, has multitudes of cases of rheumatism. Children die in great numbers in towns of cholera infantum, and everywhere of scarlatina and measles. Continued and typhoid fevers are common.

The Americans, who do everything in a hurry, educate their doctors accordingly. In some states a student is required to read three years under some regular physician and to attend, during this period, two courses of lectures. But if he pays his fees, exhibits a certificate of his study period and passes a hasty examination he receives his Medical Diploma. He has full authority to bleed and blister, set broken bones and cut off limbs. But in most states there is no need of this authorization. Anyone may practice medicine who chooses to do so. No diploma is needed and no license required. This is the American idea of "free trade and no monopoly."

<sup>6</sup>Nichols, T. L.: *Forty Years of American Life* (1821–1861). Publishers, Stackpole Sons, New York. Reprinted by The Telegraph Press. Harrisburg, Pa., 1937.



There are no medical men as distinguished from Doctors. Also there is no distinction as a rule between Physicians and Surgeons. All practice medicine, surgery and midwifery. This is necessary in a sparsely settled country. In the large towns a few doctors have adopted a specialty.

Also there are physicians of every school. There are allopaths of every class in allopathy; homeopaths of high and low dilutions; hydropaths, mild and heroic; chronothermalists, Thomsonians, mesmerists, herbalists, Indian doctors, clairvoyants, spiritualists with healing gifts, etc., etc.

The result of so many various systems and no-systems is that thousands of young men are sent out to doctor their unfortunate countrymen; to kill or to cure or it would be safer to say to kill or not to kill according to their good luck, rather than to their science and skill.

This want of any science or established practice in medicine has the natural effect of undermining the confidence of the public in all systems and pathies, leaving them a prey to the most vulgar, mercenary and barefaced quackeries. The consequence is that the shops of druggists and general dealers are filled with their advertisements. Fortunes are made by the manufacture of sarsaparilla, pills, catholicons, bitters, cough elixirs, cures for consumption, etc. The box of pills that costs a penny is sold for a quarter. The decoction which would be dear at five cents sells for a dollar. The consumptives are dosed with preparations of opium, and dyspeptics find relief in bitters whose effects are chiefly attributable to the stimulation of whiskey. One can scarcely conceive of an honorable profession reduced to a lower ebb than that of medicine in the United States.

While medical science is in this chaotic condition in America, hygienic or sanitary science is generally neglected. A thoroughly educated united philanthropic profession, aided by state governments, might do much for health in America.

These words were written a century ago about the medicine in our land. The chapters on the numerous specialties that will follow in this volume will reveal the almost incomprehensible progress of the half century 1850 to 1900, which stands in sharp and amazing contrast to the hodgepodge of theories and practice enumerated above.

One other contribution deserves special mention. In 1881, Dr. A. Reeves Jackson presented a paper before the Illinois State Medical Society on the subject of "The Present Status of Specialism in Medicine and Surgery" in which many important details on this topic are given. (See Chapter VII.)

## CHAPTER VI

# THE GENERAL PRACTITIONER: HIS PREPARATION, ENVIRONMENT AND EXPERIENCES

By TOM KIRKWOOD, M.D.\*

**I**T is difficult for the physician of the 1950's to imagine the handicaps faced by the general practitioner in Illinois one hundred years ago. But the reasons are obvious: the equipment of that period was meagre and the methods were crude.

In 1850, the stethoscope was just coming into general use. Like many new instruments, it was not used very efficiently. Clinical thermometers were ten inches long and were large, clumsy and hard to carry. By 1870 they became more serviceable. While the hypodermic syringe was introduced in 1852, neither Dr. W. W. Keen nor Dr. James Tyson used either this instrument or a thermometer during service in the Civil War years of 1862 to 1865. The microscope was still a curiosity, so far as the general practitioner was concerned, and remained so for many years. Blood counts and other blood examinations were unheard of. Urinalysis was only beginning to receive some attention but did not come into general use until years later. Ether and chloroform were being used only by the bolder and more progressive physicians and only in cases where the patients could be persuaded to permit it. Many drugs were available but were not standardized and were not well understood. The most dependable were cinchona, mercury and opium. Quinine was one of the few specific drugs available, but it cost six to eight dollars an ounce in 1846. Bacteriology was still far in the future; belief in the unity of fevers still prevailed.

The physician often compensated for his lack of equipment and knowledge by his impressive manner. The successful doctor was positive, forceful and definite in his statements, and had to be somewhat of a dictator to control the people of that day. Instead of dressing like the average citizen, he often wore a swallow-tailed coat and high silk or beaver hat. Since the roads and streets were often muddy, it was perfectly proper to stuff the

\* Dr. Kirkwood is a well-known physician engaged in general practice in Lawrenceville, a small city in Lawrence County of Eastern Illinois. Recently he wrote a medical history of his county, much of which data he now has inserted in this chapter.—*Editor*

trouser legs into the tops of high leather boots, even when wearing the silk hat and swallow-tailed coat. Such attire was reserved for prominent politicians or important candidates for office, judges, physicians, and a few other favored individuals. The doctor often wore a beard, mustache or sideburns, or any combination of these adornments. One elderly physician once told the writer that he wore no beard when he started to practice, but looked too young and unimpressive and got no patients. However, after growing a flowing black beard and moving to a new location, business boomed.

Through the years, most physicians had to acquire a good working knowledge of practical psychology or quit. One practitioner, who was licensed in 1877 under the "years of practice" provision, was called to see a young lady who always "took carbolic acid" when things did not go to suit her. At such times the neighbors rushed in, tried different home remedies, massaged her arms and legs, and used other forms of entertainment while waiting for the doctor to arrive. In the absence of the usual family physician, this practitioner took over with good results. He examined the young lady's mouth, and then called for water, a glass and a spoon. After mixing a potion in the glass, he turned to the girl's mother and said, "Madam, if your daughter has really taken carbolic acid, this will save her, but if she hasn't, God help her, for it will kill her within a few seconds." He started toward the bed. The young lady yelled, "I won't take it," and the old doctor said, "You don't need it."

The physician in general practice was of necessity a rugged individual both physically and mentally. It took a strong physique to stand the exposure and long hours of work which these men often encountered. It took an equally rugged mind and character to meet the responsibilities and make the decisions which constantly confronted them. Many physicians lived far from town on farms which they managed when not busy with their patients. If living in a village or small city, they often ran a drugstore in connection with their practice. One enterprising member of our profession in Southern Illinois had his drugstore and also conducted an undertaking establishment.

Whether living in city, village or country, the physician depended upon horses for transportation. He usually owned from two to five or six riding or driving animals, a buggy or two, and possibly a cart besides the saddle and saddlebags which he used when the roads were too bad for the buggy or cart. Country roads and usually many streets were poor in summer and next to impassable in winter or after heavy rains.

So the men in general practice had to deal with poor transportation, bad roads, bad weather, flooded streams, and the perversities of a pioneer population. It took real courage and character to control the pioneers whom



they had to treat. When any physician succeeded in gaining the respect of the public, he was ever after a power in the community. As an educated man he was looked up to as a leader. He was active in providing better schools and in promoting church work, and was often a leader in local and state political activities.

The general practitioner often had his office in a rear room in a drugstore, or at times in a part of his home. However, the office which was seen most frequently was a small one story building consisting of two or three rooms located on one corner of the lot where he lived or on a nearby street. The waiting room which faced the street was furnished with a few chairs, the doctor's bookcase, a small table and possibly a couch. A door in the rear of this room opened into a second or consultation and examining room. Its furniture consisted of a roll top desk, a chair-table, an instrument case and a few chairs. A partition to one side of this room provided a small drug room. Two rooms were usually enough, but occasionally a third room was added behind the consultation room. The entire space was heated with wood or coal burning stoves. Provisions for water supplies and toilet facilities were meagre and primitive. Coal oil lamps furnished light until the coming of gas or electricity.

Since the telephone had not yet arrived, the patient had to send for the doctor, or very often the family waited until the doctor was seen driving on his rounds and called him in. One elderly patient of mine told me about stopping Dr. J. C. Barr as he passed along the road. He asked her what she wanted and she showed him a felon on her thumb. He placed the thumb on the gate post, pulled a scalpel from his pocket and split the thumb wide open; then wrapped it with a bandage. She asked about the bill and he said "Two dollars." She said, "Don't you think that's pretty high?" and he retorted, "I'll open it again if you're not satisfied." This occurred about 1885; neither the doctor's hands nor the patient's thumb was washed and the scalpel, of course, was not sterilized. Very often after leaving a house, the doctor would be questioned along the road by neighbors concerned about the patient's condition. Dr. Firebaugh of Crawford County on one such occasion told the first one that John had lung fever, the next congestion of the lungs, the next winter fever, the next pneumonia, the next lobar pneumonia, the next pneumonitis, etc. He also gave various reports on how sick John was. When he returned the next day, the whole countryside was in an argument about what was the matter with John and how serious his illness really was.

In the years between 1850 and 1900, the practice of medicine went through the most revolutionary change in its history. Since practically all physicians were engaged in general practice during most of this period, the upheaval affected everyone. This half-century can be roughly divided into

two periods. In the first (1850-1875) little was known and nothing was taught concerning the bacterial causes of disease. Hence, the physicians in Illinois, as elsewhere, differed little in their practical ideas and methods from those in the quarter or even half century preceding 1850. There was, it is true, marked evidence of unrest within the profession. Some disagreed with harsh methods of treatment, such as bleeding and severe purgation. Others stoutly defended these methods. New systems of practice were proposed and new medical schools were started to teach these systems. Little actual progress was made until the second period (1875-1900) with its dramatic discoveries in bacteriology, which laid the firm foundation for medical and surgical practice as we know it today.

It is difficult for us to realize that the bacterial origin of many diseases had received little consideration only seventy-five years ago. Prior to 1875, the few physicians or other scientists who were bold enough to advocate such an idea were often ignored, forgotten or, if too persistent, were ridiculed and persecuted. The first lectures on bacteria in Illinois were given in 1877 by professor Thomas J. Burrill at the University of Illinois in Urbana.<sup>1</sup> In 1882, Dr. Romain J. Curtis was elected to the Chair of Hygiene at the College of Physicians and Surgeons in Chicago. He taught the "germ theory" and believed that it explained the cause of many diseases. The other twenty members of the faculty at first opposed this theory and only the influence of Dr. Nicholas Senn saved Dr. Curtiss from being asked to resign. In time the rest of the faculty was converted to his ideas.<sup>2</sup> The new science was not named bacteriology, however, until 1884.<sup>1</sup>

In the medical profession, there were great differences of opinion and practice between the various systems. Homeopathy was sweeping the country, and the adherents of this system believed in infinitesimal doses of drugs and in much milder and gentler methods than those used by the Regulars. The Botanics, after seeing the ill effects of calomel and some other drugs of mineral origin, refused to use "mineral poisons" and used only drugs derived from plants, forgetting that some plant poisons were as deadly as the minerals used by the Regulars. "Lobelia #6" was a favorite remedy of the Botanics. When he didn't know what to do next, the Botanic turned to this remedy even as we today turn to antibiotics. The Physio-Medicals used the basic ideas of the Botanics, of which the system was an offshot, and added baths of various sorts, the sweat bath being the most popular. This was produced by swathing the patient in hot, wet sheets, wrapping him in blankets and surrounding him with hot bricks and (in season) hot roasting ears. There were seventeen other systems. Many of

<sup>1</sup> Rawlings, I. D.: *The Rise and Fall of Disease in Illinois*, p. 244. Published by The State Department of Public Health, Springfield, Ill.

<sup>2</sup> Salmonsén, Ella M.: *Unpublished Records of Illinois Physicians*.

them resulted from the revolt against the methods of the Regulars and probably improved the practice of medicine by calling attention to some of its more outstanding faults. There was constant warfare, usually of words, between the several systems, and occasionally this warfare ended in physical combat. In the 1860's, one Lawrence County Regular and a Botanic reached this stage. While standing in a drugstore, the Regular saw his Botanic adversary riding down the dusty streets of Lawrenceville in his buggy. He picked up a heavy iron weight from a nearby set of scales and, running into the street, threw it at his enemy. His aim was excellent, the weight striking the victim on one side of his chest and breaking a few ribs. And the fight was over. The populace enjoyed the diversion, however, and the weekly county paper made the most of it. Its headlines announced: "Conflict Between Calomel and Lobelia. Calomel Wins."

In 1866, Dr. John M. Scudder, Professor of Pathology and the Practice of Medicine in the Eclectic Medical Institute of Cincinnati, stated:<sup>3</sup> "The dedication should have been made to the children of this country, as an endeavor has been made to free the practice of medicine from everything harsh and revolting, and to substitute those gentle means and appliances, which, while successful in counteracting disease, entail no present or future suffering. The practice of medicine in the past has been a chapter of horrors, which the truer civilization of the present will not tolerate." In this book there is an article on congestion of the liver, which the author stated "is known by nurses and old ladies as liver-grown." He expostulated at one time with an old nurse who was roughly massaging a baby's enlarged liver with goose grease, but she told him that all doctors were fools and that she would have her own way. The results justified her claims concerning her ability to treat "liver-grown," as the child made a rapid recovery. Scudder said he learned a lesson from this which he put into practice many times; that torpid organs can be stimulated to action by passive movements, and their circulation and nutrition decidedly improved.

In contrast to the methods of the new systems, the Regulars believed in meeting disease head-on with large doses of calomel and jalap (10 and 10 grains) and other medicines in the same proportion. They also believed in bleeding, setons, the moxa, leeching, cupping, and other more or less drastic measures. The Regulars followed the teachings of such surgeons as Drs. Daniel Brainard, Samuel Gross and Robert Druitt, and such physicians as Drs. Daniel Drake, George B. Wood, N. S. Davis and Thomas Watson. All of these men had written books which were in use by many practitioners.

During the 19th century, general bleeding was an ancient method of treatment used both in Europe and America for many diseases and espe-

<sup>3</sup> Scudder, John M.: *Eclectic Practice in Diseases of Children*. American Publishing Co., Cincinnati, Ohio. 1869.



cially for those of an inflammatory nature. The theory of its supposed success was simple, namely, that the removal of blood carried from the body the injurious agents of varying nature that were responsible for the symptoms of many diseases. The Illinois physicians of that period, as did all others, applied this mode of treatment almost universally as they had acquired the technic from the earlier doctors of the East. Dr. Samuel D. Gross, one of our greatest surgeons of the last century, has commented on the method succinctly as follows:<sup>4</sup>

"General bleeding may justly be regarded as standing at the head of the list of constitutional remedies for inflammation, as it is at once the most speedy and efficient means of relief. The blood is usually drawn from one of the larger veins and is permitted to flow until a decided impression is made on the system. Its value was not overestimated by the older writers when they designated it as the *summum remedium* in the treatment of inflammation, and yet, strange to say, blood letting, notwithstanding the high rank which it has always occupied as an antiphlogistic agent, has of late fallen very much into disrepute, particularly on this side of the Atlantic, where it once had so many advocates. A great change has come over the profession in this respect within the last fifteen years, and is steadily gaining ground. . . . More quarts of blood were formerly spilt than ounces now. If we formerly bled too much, too frequently, too copiously, and too indiscriminately, it is equally certain, at least to my mind, that the operation is not often enough resorted to at the present day. Many a deformed limb, blind eye, enlarged spleen, and crippled lung bear testimony, in every community, to the justice of this remark. . . . The late Dr. Francis of New York while laboring under a violent attack of croup and tonsillitis was bled to the extent of nearly two gallons and a half in a few days. Such cases are remarkable as showing the wonderful power of endurance of the system, but they are not to be held up as examples for imitation of the practitioner."

Infant mortality was appalling during the pioneer days. The diarrheal diseases were largely to blame. There were many ideas concerning its origin. Some said it was due to paralysis of the nervous system by the severe summer heat; others supposed it to be entirely due to indiscretions in diet, neurosis, summer complaint or cholera infantum. In 1871, over 70 per cent of totals deaths in Chicago occurred in children under five years of age.<sup>1</sup>

The year 1877 was a momentous one in Illinois medical history in three respects. During that year the first lectures on bacteriology were given at the State University at Urbana; the first workable law was put into effect regulating the practice of medicine, and the State Board of Health was established. It will be recalled that the Illinois Territorial Government had passed a law in 1817, controlling the practice of medicine. Again in 1819, the new State Legislature passed a similar law for the same purpose but it was repealed at the next session. Another attempt in 1825 to provide satisfactory legislation was made but it met the same fate. From 1825 until

<sup>4</sup> Gross, Samuel D.: *A System of Surgery*. Vol. 1. Henry C. Lea, Philadelphia, Pa. 1866.

1877, therefore, anyone who wanted to practice medicine in Illinois could hang out his shingle and start to work. When the 1877 law went into effect, half of the 7400 doctors in the state were nongraduates, and 490 were using fraudulent credentials, and some were practicing under assumed names.<sup>1</sup>

Prior to 1875, every doctor was a physician and surgeon. Surgeons and ophthalmologists were the only specialists of any standing, and these men almost always carried on a general practice along with their specialties. Surgical procedures were operations of necessity following accident or were surgical emergencies, usually performed by local practitioners who had, or claimed to have had, the necessary surgical experience. Since almost every locality of any size had a practitioner who had served as a surgeon or assistant surgeon during the Civil War, many of these surgical emergencies were in fairly competent hands. Difficulties in transportation were good reasons also for doing the operation on the kitchen table. Hospitals were not available outside the larger cities so the patient had to be treated at home. The writer can remember when there was not a hospital along the Baltimore and Ohio Railway between St. Louis and Cincinnati. The dictum in the days before Lister was "never touch the peritoneum," and this was strictly followed with the exception of operation for ovarian tumors which were seldom removed until their size compelled the procedure. Penetrating injuries to joints by gunshot wounds or otherwise were always fatal without amputation, and the mortality following amputation was very high.

Little had been heard about inflammation of the appendix until it was described by Fitz in 1886. Before that, a patient with a severe pain and tenderness in the right lower quadrant had "cramp colic," "inflammation of the bowels" or "locked bowels." When physics of various sorts failed to produce results or made matters worse, quicksilver was given as a last resort, and it usually was just that. As a small boy in the 1890's, the writer can remember hearing members of his family discussing relatives or neighbors who had died of these diseases and talking about the remedies which had been tried. Surgeons at that time were just beginning to operate for appendicitis.

Puerperal fever took many lives in Illinois. Watson in 1865 described<sup>5</sup> various epidemics of this disease and insisted that it was contagious. He said: "The hand which is relied on to assist the mother in the perilous hour of childbirth may literally become the innocent cause of her destruction. . . . In these days of ready invention, a glove, I think, might be devised which would be impervious to fluids, and yet so thin and pliant as not to

<sup>5</sup> Watson, Thomas D.: *Lectures on the Principles and Practice of Physic*. Philadelphia. Lea & Blanchard, 1844.

interfere materially with the delicate sense of touch required in these manipulations. One such glove might well be sacrificed to the safety of the mother in every labour." Such a glove was finally devised by Dr. W. S. Halsted of Johns Hopkins in 1890. As late as 1915, I saw physicians in Illinois who had never used rubber gloves while doing surgery or while examining and delivering obstetrical patients.

In order to keep up with the revolutionary changes in medical practice of the period, physicians in Illinois soon organized medical societies where difficult cases could be discussed, experiences exchanged, and the latest discoveries as reported in new books and medical journals could be considered. One of these, the first interstate society west of the Alleghenies, was the Lawrenceville Aesculapian Society, organized unofficially in 1845 and officially in 1846.<sup>6</sup>

#### NOTABLE EARLY LAWRENCE COUNTY PHYSICIANS

Dr. Dyer Catterton of Virginia arrived in Illinois in 1820, stopping for a short time at Fort Allison and then locating a few miles north of Lawrenceville. He had served with Jackson at the Battle of New Orleans. It is said that he was a well educated man for his time. Drs. J. A. Kuykendall and Gabriel T. Cauthorn came in 1821, and located at Lawrenceville. Dr. Thomas Cresap Collins settled three miles south of Lawrenceville in 1823. Dr. W. C. Anderson arrived in 1827; he later represented this district in the State Legislature, being in Springfield when the Aesculapian Society was organized and incorporated. He was a Scotsman, a good politician and a great hunter. His hounds usually accompanied him on his calls. If they struck a likely trail, the doctor usually forgot his patients until the game was killed or escaped. It was necessary to blindfold one of the high spirited horses which he rode before it would go onto a ferry-boat. On one occasion the blindfold was removed in the middle of the stream and the horse at once jumped over the rail into the river. Dr. Anderson was involved in a warm political dispute with Abraham Lincoln while in the Legislature. He once fought a duel with a local adversary, pitchforks being used as weapons.

Other early physicians were Drs. G. C. Barton (1834), G. D. Wolverton (1835) and W. B. Caldwell (1836). Dr. Hiram H. Hayes came in 1840 and served as preceptor for Elisha C. Banks, who was admitted to practice as his partner in 1843. Dr. Thomas D. Washburn, a Kentuckian and a very fine physician and gentleman, arrived in 1841. Dr. William Mead arrived in 1842. All of these men located in Lawrenceville. Dr. David Adams located on the St. Louis Road near the west Lawrence County line in 1840. Dr. J. C.

<sup>6</sup> For a history of this Society, the reader is referred to Chapter XXV in this Volume.  
—Editor



McCarty opened an office in St. Francisville during this year also. Drs. Peter Hale and Wellington B. Norton opened offices in Russelville in 1840, and Drs. G. S. Tarr and H. B. Broyles located there in 1845. Dr. David Burget located on the St. Louis Road near the present site of Sumner in 1845. About this time Dr. Jonathan Leavitt Flanders settled about five miles southwest of Lawrenceville. Drs. I. A. Powell and J. B. Maxwell came to Lawrenceville in 1847 and 1848.

Dr. Powell compounded a liniment which was used in the Army during the Civil War; in time he received a political appointment and moved to Washington, D. C., where he spent the rest of his life. Drs. J. M. Boyle and C. M. Hamilton located in Palestine, Ill. Drs. John J. Jacob, Samuel Leshner, and Paul Sears practiced in Mt. Carmel, and Dr. Samuel Thompson in Albion in Edwards County. Drs. James Kelly, J. R. Craig and Oliver George were from Olney.

The physicians mentioned above furnish a good example of the type of men who were practicing medicine in eastern Illinois in 1850. Some had entered practice without much education or any pretense at legal formalities. Knowledge of medicine was often a secondary matter. It is difficult to tell even where many of these men, who were well qualified, received their medical training. Some had worked with preceptors for awhile, attended a term or two of lectures at St. Louis, Cinicinnati, Louisville or Chicago, and then entered practice. Several had better than average training and some were outstanding.

In spite of their handicaps, American physicians of the period 1850 to 1900 were laying the foundation upon which modern medicine has been built. Some of their opinions were strange and fumbling, but many of the deductions they made, considering the limited scientific information at their disposal, were astonishingly accurate.

## CHAPTER VII

# INTERNAL MEDICINE

By GEORGE H. COLEMAN, M.D.\*

### INTRODUCTION

AS early as the mid-19th century it was evident that there was a great need for wider distribution of condensed medical information adapted to the requirements of country practitioners. Three factors were concerned in this conclusion: (1) The medical profession was making rapid strides in improved means of diagnosis and the application of new remedies; (2) the great distances between the sources of improvement and the physicians, as well as the distances between the practitioners themselves, and (3) the necessity of disabusing public opinion of the impositions of empirics, for the spread of which doctrines new frontiers afford peculiar facilities. To satisfy this need, the first medical publication to be published in Illinois and in all the vast northwest region—the *Northwestern Medical and Surgical Journal*—was issued in 1844. There was a plea for support of this publication from all the physicians in the immediate region, not only to keep pace with the other and older states and districts of the Union, but to apprise them of what was occurring in the West.

Also in the mid-19th century, medicine was undergoing a transition both nationally and locally, especially in the field of medical organization. The American Medical Association was founded in 1847; the Illinois State Medical Society was reorganized and the Chicago Medical Society organized in 1850. Dr. Nathan Smith Davis of Chicago was a principal factor in all these movements.

The material presented in the following pages has been culled largely from the transactions of the Illinois State Medical Society, thus pinpointing the progress in the practice of internal medicine within the state's boundaries. At times, articles from other medical publications are discussed which have had a far-reaching and basic influence on internal medicine. Such statistics as are included are intended to depict the disease conditions within the state during the half century under consideration in this Volume.

\* Dr. Coleman, a graduate of Rush Medical College, for many years has been Secretary of the Institute of Medicine of Chicago. He at present is President of the Chicago Society of Medical History, and is Associate Professor Emeritus of Northwestern University Medical School. For years he has carried on a large private practice in internal medicine in Chicago.—*Editor*

1850

The typical medical practitioner of 1850 still employed bleeding, emetics and purging. These methods were considered and taught as standard treatment based upon dogmas which had been current for many years. Benjamin Rush had been one of their main promoters, and his was a name widely known and respected throughout the country.

At this time, too, patent medicines came into use, widely advertised by the newspapers and by medical sideshows, quacks and fakirs. Only a few medical meetings of ethical physicians were held because not many such doctors had as yet reached this country. But soon they did arrive in considerable numbers, and it was not long before the State Medical Society, organized ten years earlier but now almost defunct, was again organized and rapidly became a forceful and permanent group in the state.

The first meeting of this reorganized Society was held in Springfield, at which time a Committee on Medical Practice was appointed with instructions to report at the next annual meeting.

The first annual meeting of the State Society was held in Peoria with the President, Dr. William B. Herrick, Professor of Anatomy and Physiology at Rush Medical College, in the chair. He spoke on "The Remedial Properties of Alimentary Substances and the Changes Produced by Oxygen in Health and Disease." Among other things he said: "The time is not far distant when the truly scientific physician will use as remedies such substances only as help to constitute in health the solids and fluids of the body. . . . Regard manifestations of disease in the human body as evidences of want of harmony in the performance of functions consequent upon excess or deficiency in some of its parts or elements which may be and often are more promptly restored by the addition or abstraction of one or more of its normal and proper constituents than by introducing into the system, powerful or even poisonous foreign substances." He characterized disease, chiefly in the north, by excessive oxidation, and gave pneumonia, pleurisy, croup, rheumatism, tuberculosis and skin affections as examples, whereas those diseases characterized by deficient oxidation—more common in the south—were yellow, remittent and intermittent fevers, jaundice and malignant erysipelas, which he attributed to "an accumulation of un-oxidized effete matter in the blood and tissues." It was his opinion that the use of animal oils, lemon juice, common salt and soda were effective remedies, even in most serious forms of disease.

Dr. N. S. Davis of Chicago fought for improved sanitation as a public health measure. No sewage system worthy of the name existed in Illinois in 1850; garbage and refuse were thrown into the Chicago River or were allowed to accumulate in alleys, while drinking water came from shallow



wells or from the lake shore. Dr. Davis outlined a plan which not only would take care of the conditions then present, but would be capable of expansion to care for a growing city and would prevent Chicago from being soon overwhelmed with filth and disease. He gave many public lectures on this subject in which he stressed these facts as well as the need for adequate ventilation, adequate infant care, temperate eating, and temperate or no use of alcoholic drinks. In one such lecture, Dr. Davis condemned Chicago dwelling as being too crowded and lacking in ventilation. He pointed out that five women and children were sick for every adult male stricken in the city, his explanation being the freedom of the male citizen to leave his stuffy, often windowless habitation.

The following resolution adopted by the Illinois State Medical Society at its first session illustrates the practical quality of mind of the physicians: "In consultations, theoretical discussions should be avoided, as occasioning perplexity and loss of time. For there may be much diversity of opinion concerning speculative points, with perfect agreement in those modes of practice which are founded not on hypothesis, but on experience and observation."

Chicago, in 1850, reported 420 cholera deaths, and smallpox accounted for 46.6 deaths per 1,000 cases in a population of 28,269 in this city. Dr. John Evans, against much resistance, led a strong fight to establish quarantine against cholera, claiming that the disease spread along lines of intercommunication and was subject to no boundaries except those that prevent human intercourse. Cleanliness, quarantine and a pure water supply had long been advocated by some medical men as prophylactic safeguards against the common communicable diseases.

### 1851

Dr. Samuel Thompson of Albion, Chairman of the Committee on Medical Practice of the Illinois State Medical Society, reported on the prevalence of typhoid, malaria and the exanthemas. He called particular attention to "milk sickness" or "trembles" and the possibility of its malarial origin. He urged the use of purging with calomel, salt and soda to remove the poison, and suggested whiskey or brandy as a stimulant.

There was much interest in the description by Dr. John H. Evans of the first case of cholera, April 28, 1851, in the Captain of a canal boat eleven days after the opening of the Illinois River. Dr. Evans made a plea for reports by physicians of all epidemics encountered from January 1, 1845 to the close of 1851.

The *Northwestern Medical and Surgical Journal*, May 1851 to March 1852, published a series of articles by Dr. N. S. Davis on the "History of Medical Education," a subject in which he was keenly and progressively in-

terested, as attested to by his campaign of over fifty years to raise the standard of medical teaching. He furnished many instructive and informative accounts of ward walks in the Illinois General Hospital.

The *Journal of the American Medical Association* published an article on "Prevalence of Quackery in America" by Dr. James H. Stuart; also a report taken from the English literature on the "Protective Powers of Vaccination Against Smallpox," and reports of cerebrospinal arachnitis, the empiric use of aconite in fevers and neuralgias, and poisoning by arsenic, opium and mercury. In the section on Principles of Therapeutics, it was stated that "combination of several articles of like properties will increase the aggregate effects," thus giving support to the "shotgun prescriptions" or multipharmacy which was so prevalent at that time and for several decades thereafter.

Chicago, in 1851, reported 216 deaths from cholera and "much smallpox."

1852

Dr. Samuel Thompson, President of the Illinois State Medical Society, delivered an address on "The Nature of Disease," in which he said: "Be not the first by whom the new is tried, nor yet the last to lay the old aside. . . . Use known facts and remedies; proceed cautiously for we are only in the infancy of medical science. . . . As sensible men we cannot do more than to restore health; whatever is more or less than this is evil. We cannot remove anything from the body except by the natural organs, unless mechanically, for we cannot add one thereto; neither can we act through the organs except through the natural impressabilities and forces and functions with which, in a state of health, they are endowed. To understand, therefore, their healthful duties and sensibilities; to aid these when their powers fail, by the appropriate stimuli; to soothe them when they act too much from over-excitement; to take care that all the matters inimical to health, either as regularly produced within the organism, or as taken from without, be they ingesta, or malaria, whether of terrestrial or animal origin, appear to me to contribute some of the most important duties of practice."

Dr. N. S. Davis, always the indefatigable worker and writer, was Chairman of the Committee on Medical Practice and set down the following objectives of the Committee: (1) Improvements effected in Illinois in management of individual diseases, and (2) progress of epidemics, referring, as occasion required, to medical topography and to the character of prevailing diseases in special localities, during the term of their service. The committee as a whole recommended use of pyroligneous acid as a gargle; the use of collodion repeatedly in variola to prevent pitting or at least to lessen it greatly, and the use of sodium chloride as a remedial agent. They were not, however, in full agreement with the recommendation of Dr. A. G. Henry

of Springfield that "the uses of large doses of opium and calomel were superior to small doses in fevers, particularly dysentery, typhoid and bilious intermittents." The committee reported much dysentery and "periodical fever" (malaria), and a serious epidemic of cholera in the fall of 1851.

Dr. Hosmer A. Johnson spoke of cancerous disease as caused by "morbid accumulation and distribution of calcareous and other salts." He suggested that cure could be obtained by exclusion of any excess of salines or their removal from the system. However, he advocated the use of large doses of common salt in typhoid and in "intermittents" because of its quality of preserving the blood globules and acting as an alterative and tonic.

There was considerable discussion of the use of "extract of beef's blood" or "extractum sanguines" in the treatment of anemias of whatever cause, as such extract provided "globuline hematine salts mixed with fibrin" which are "precisely the ingredients that are most deficient in anemia."

Dr. A. B. Palmer discussed the pathology of spontaneous hemorrhage before the Chicago Medical Society in February 1852, and outlined the causes as: (1) structure and physical qualities of the blood vessels where blood escaped; (2) abnormal condition of the quality and quantity of the blood, and (3) abnormal condition of the force with which the blood is repelled.

Cod liver oil was highly recommended at this time for stomatitis materna "nursing sore mouth," and in cases of marasmus in children.

An interesting case of rattlesnake bite was reported, with marked purpura, bleeding gums, leg ulcers and incoagulability of the blood. The bleeding surfaces were dressed with "matico," and the patient was given 5 grains of potassium iodide alternated with 15 grains of sodium chloride for a few days; then 25 drops of oil of turpentine every 6 hours until oozing subsided, and then 5 grains of quinine with each dose of oil. There was rapid recovery with a sloughing of part of the bitten finger.

Publication of the *Northwestern Medical and Surgical Journal* continued. Through the years it was fortified by extracts from the proceedings of medical societies, addresses to graduating classes, editorials, book notices, foreign as well as domestic letters, and much medical miscellany from medical literature. Illinois physicians also contributed their articles: Dr. Erial McArthur of the Cook County Medical Society wrote at length concerning typhoid fever and Asiatic cholera; Dr. Samuel Thompson of Albion and Dr. J. J. Lescher of Mt. Carmel described milk sickness and malaria in detail, and both thought milk sickness to be malarious in nature. Other papers which appeared in this publication during 1852, were "Pathology of Epilepsy" by Dr. B. Marshall Hall, and "Pathology of Asphyxia" by Dr. Thomas Johnson of the University of Virginia.



Cholera was still plaguing Chicago, as 630 deaths were reported for the year from this disease.

1853

Dr. Thomas Hall of Toulon, who later showed great interest in forensic medicine, presided at the annual meeting of the Illinois State Medical Society in the absence of the president, Dr. R. Rouse of Peoria. Dr. N. S. Davis delivered the principal address on the "Intimate Relations of Medical Science to the Whole Field of Natural Sciences."

The Committee on Drugs and Medicines, with Dr. J. V. Z. Blaney of Chicago as Chairman, reported the formation of the American Pharmaceutical Association in Boston in August, 1853. The State Society requested that Dr. Blaney act as chairman of a committee to be appointed to co-operate with this association and acquaint the membership with all information obtained.

A serious epidemic of smallpox was reported in Chicago.

1854

Dr. Daniel Brainard presided at the meeting of the Illinois State Medical Society and read a paper on rattlesnake bite, in which he advocated the use of cupping, infiltrations and iodide of potassium.

Dr. N. S. Davis began regular publication of reports on the health of Chicago, and this year 1424 deaths from cholera were reported in that city.

Dr. Henry Parker won the prize offered by the State Society with his essay on "The Differences in the Physiologic and Pathologic Action of that Class of Remedies Called Stimulants of which Alcohol is the Type, and Tonics, of which the Bitter Barks and Iron may be Considered as Specimens."

1855

At the meeting of the State Medical Society, Dr. N. S. Davis continued his never-ceasing crusade against the use of alcoholic beverages in his long discourse on "The Effects of Alcoholic Drinks on the Human System and the Duties of Medical Men in Relation Thereto."

Dr. Steven Williams of Laona, Winnebago County, a former Professor of Botany at Dartmouth College, listed 192 principal medical plants enumerated by botanists and known to be growing in Northern Illinois and Wisconsin, together with some suggestions for their use.

Dr. J. V. Z. Blaney gave expert testimony concerning strychnine as a poison in the noted trial of one George W. Greene who was convicted of murder.

At the meeting of the American Medical Association, Dr. Sam T. Blatchford of New York urged the use of solidified milk as 100 per cent useful.

This year saw the first use of quarantine placards in Chicago, where during the year there had been 30 deaths from smallpox and 147 from cholera.

1856

At the meeting of the Illinois State Medical Society in Vandalia, Dr. N. S. Davis gave the annual address on "Phthisis: The Influence of Alcoholic Liquors Either in Preventing or Curing Tuberculosis."<sup>1</sup> He described the most popular treatment as rest, cold air, exercise, proper nutrition, cod liver oil, fat meats, etc., plus alcoholic liquors and stimulants. He listed the effects of alcohol on the human system as follows: (1) Presence in the blood produces temporary exhilaration or excitement of the nerve structures; (2) diminishes excretion of carbonic acid from the lungs, diminishes the change of color from arterial blood, diminishes generally the organic changes in the system; and (3) depresses body temperature and lessens muscular tone. Dr. Davis expressed his opinion that alcohol does tend to make drunkards and to perpetuate the vice of intemperance. He argued forcibly against the use of alcoholic drinks in the therapy of tuberculosis.

Dr. E. R. Roe of Bloomington, speaking for the Committee on Medical Practice, gave a lengthy discourse on calomel and pyalism. Dr. P. A. Allaire of Aurora spoke of the use of chloroform and its effects.

Dr. F. R. Payne of Marshall discussed the medicinal properties and uses of iodine as a tonic, as a cure for phthisis pulmonalis and in treatment of dyspepsia.

Dr. Samuel Thompson, also speaking for the Committee on Medical Practice, cautioned that there are "more false facts than false theories. . . . Loose observations, careless records and careless generalizations can lead to nothing but error. . . . It is careful recorded observations, not remembered observations, that are needed as contributions to medical science."

There was discussion of periodic or seasonal fevers—typhoid, malaria, variola, milk sickness, pneumonia—and of the preservation of milk.

As there was no agreement among physicians as to what should be called typhoid fever, a questionnaire was sent to all physicians asking: "Had typhoid occurred in your neighborhood? Describe what were the symptoms

<sup>1</sup> Dr. Davis was a prolific writer. One wonders how he found time for this in addition to a busy practice. He wrote on such varied subjects as the "History of the Medical Profession from the First Settlement of the British Colonies in America to 1783"; "The Pathology of Fever"; "The Specific Nature and Communicability of Erysipelas and its Connection with Puerperal Fever"; "The Sanitary Characteristics of Chicago in 1853," and an illustrated book on the "History of the American Medical Association from its Organization to January 1855." It would almost seem that a biography of the life and activities of Dr. Davis would give a moderately reasonable account of Medicine in Illinois from 1850 to 1904.

and treatment." Unfortunately, there were very few replies. It was the consensus that "it is very difficult for a physician in daily, laborious and extensive practice to examine carefully, amid all the noises of a country log cabin with the cooking and creaking and squealing around, and as difficult to record carefully such observations when made, but they are necessary and will repay the labor."

Dr. J. O. Harris of Ottawa and Dr. Samuel Thompson of Albion made charts of meteorologic conditions in relation to the incidence of various diseases. Periodic fevers, most remittent and intermittent with some "pernicious intermittents" were very prevalent in 1855 to 1856. Dr. Thompson tabulated 356 cases from January 1855 to May 1856, equally divided between the sexes, with a ratio of 2 quotidian to 1 tertian and only 4 cases of quartan type. The greatest number and the most malignant occurred in the bottom lands.

Dr. F. B. Haller, Fayette County, reported on milk sickness ("sloes") occurring in some parts of the country and confined to particular localities where there was stagnant water. He reported that this disease was worse in dry seasons, occurring from July to very cold weather. He was of the opinion that the cause was a *mineral poison, affecting the animals' solids and fluids*; that "whoever eats of them becomes affected with animal poison, giving the symptoms we find when called to treat them." Dr. Haller suggested treatment with calomel and opium until slight ptyalism occurred, then purgation followed by iodide of potassium, quinine and iron. He stated that this was the "same treatment I use for painter's colic." At this time eastern seaboard physicians reported milk sickness as "due to ingestion of milk."

1857

Dr. H. Noble of Heyworth gave the annual address at the meeting of the State Society. In this he made a plea for the establishment of more medical societies and more medical periodicals. He pointed out the wastefulness and futility of trying to educate or train applicants for the degree of Doctor of Medicine with deficient preliminary education. He stated that "The destiny of medical science is onward. . . . Medicine should at least keep pace with civilization."

Dr. C. N. Andrews of Rockford reported that the Committee on Medical Practice favored sending out circulars of the questionnaire type, asking for specific information on the occurrence of prevailing diseases, epidemics, type of treatment and especially the kind of drugs used, with direct questions regarding the use of opium, mercury, quinine, veratrum viride, butterfly weed or pleurisy root; bleeding, influence of weather and environ-



ment, etc. It was emphasized that since 1850 many valuable prescriptions had been offered to physicians. It was further recorded that the committee favored the use of indigenous rather than imported drugs.

There were two inaugural addresses or theses on milk sickness or the "sloes."

Dr. N. S. Davis, as head of a committee, reported on "Means of Preserving Milk and the Influence of Pregnancy and Menstruation on the Composition and Nutritive Qualities of the Fluid."

Because of the absence of epidemics in Chicago during this year, the Board of Health was discontinued in that city. However, there was a malaria mortality of 53.6 per 100,000 population.

### 1858

Dr. C. Goodbrake of DeWitt County presided at the annual meeting of the State Society this year. The Committee on Medical Practice reported that the cause of milk sickness was still unknown; that search for the cause was continuing, as well as for an answer to the question of whether it was a mineral poison.

Dr. W. B. Herrick delivered an address on "Great Advances in Medical Science."

Dr. W. H. Byford of Chicago spoke on "The Physiology, Pathology and Therapeutics of Muscular Exercise" in which he emphasized the necessity of getting away from reports of common diseases to more basic medical knowledge.

There was a case report by Dr. W. Matthews of Nicholsonville, Putnam County, Indiana, of the first case of diabetes in sixteen years. The conclusion was that "cause of the disease must be looked for in the brain."

A special report was given by Dr. E. W. Philips of Dixon, Illinois, on a case of purpura hemorrhagica.

At this time the death rate from tuberculosis in Chicago was reported as 392.2 in a population of 100,000. There were 334 deaths from tuberculosis, 188 from croup, 224 from dysentery, 233 from scarlet fever, 77 from pneumonia, and 49 from typhoid fever.

### 1859

As Chairman at the annual meeting of the State Society, Dr. Hosmer A. Johnson made a plea for human dissection, both for the benefit of the public and the physician.<sup>2</sup> He also requested legislative action to enforce registration of births, marriages and deaths.

There was considerable discussion of various measures to foster public

<sup>2</sup>For further details on "Anatomy Laws," the reader is referred to Chapter XIX in this Volume, an impressive contribution.—*Editor*

health, and a Committee on Hygiene and Sewage of Cities was appointed.

Dr. A. S. Hudson, Professor of Principles and Practice of Medicine of Eora University, Sterling, Illinois, delivered the second prize essay on "Opium: Its Influence in Febrile, Inflammatory and Other Diseases." This was a masterly dissertation and was published the following year in the *Northwestern Medical and Surgical Journal*. Dr. Hudson later became a member of the Rush Medical College faculty.

Also published in the *Northwestern Medical and Surgical Journal* was an article by Dr. Edmund Andrews of Chicago on the correct use of acids and alkalies in practice. He spoke on Vitalists versus Physicists, stating that the "vitalists" claimed that common chemical affinities, such as those between alkali and acid, do not exist in the living body, while the "physicists" claimed that all the operations of life were mere modifications of the experiments in a chemical laboratory.

In this same publication, Dr. W. Godfrey Dyas of Chicago wrote an excellent article on "Diphtheria." The cause was still unknown.

A report by Dr. N. B. Benedict of the successful direct transfusion of  $2\frac{1}{2}$  ounces of human blood in a case of yellow fever was quoted from the *New Orleans News and Hospital Gazette*, and an article by Dr. DeLaskie Miller on "Sanitation in Chicago" was published in the *Northwest Medical Journal*.

1860

The annual meeting of the State Society was held in Paris, Illinois. Dr. David Prince of Jacksonville delivered the annual address on "Special Emphasis on Professional Conduct, Medical Ethics, Malpractice Suits and Medical Jurisprudence."

There was a special popular lecture by Dr. N. S. Davis concerning the mutual relations and consequent mutual duties of the medical profession and the community. This was an excellent attempt to promote better understanding and cooperation between the profession and the laity.

Dr. James S. Whitmire of Metamora delivered a special paper on "Rheumatism."

An original report was presented by Dr. A. Hard of Aurora on the use of veratrum viride. He advocated its wide use as a sedative and pointed out its favorable effect on "arterial circulation." This was, of course, long before the days of blood pressure determinations.

The Committee on Medical Practice reported a severe epidemic of whooping cough in DeWitt County, and gave their experience with tracheotomy in the treatment of diphtheria.

Physiological extracts by Dr. Claude Bernard appeared in the *Northwestern Medical and Surgical Journal*, as well as an editorial "Do Bad Smells Cause Disease?"

1861

No meetings of the Illinois State Medical Society were held in the years 1861 and 1862 because of the large number of members engaged in the Volunteer Army of the United States. It might be assumed that a good many were assigned to duty within the state, as 35,000 soldiers were stationed at Camp Douglas in Chicago.

Although there was no meeting of the State Society, the *Chicago Medical Journal* published a Symposium on the treatment of diphtheria by several authors. They also published an excellent exposition of exophthalmic goiter by Dr. R. C. Hamill of Chicago.

1862

Many copies of "Camp News" were received from the battle areas.

During this year, the alcohol question was discussed by Dr. Daniel Hooper; Dr. Ware lectured on "Value of Poor Sleep and Profuse Perspiration" and "Variations of Animal Heat as a Cause of Diseases," and Dr. Austin Flint of Bellevue Hospital in New York made a plea for conservative medicine.

1863

The annual meetings of the State Society were resumed this year, at which the address was a long dissertation by Dr. A. McFarland of Jacksonville on "Insanity and Intemperance in Relation to Some Notable Court Trials." Dr. H. Noble of Heyworth made a special report on typhoid fever.

The material presented at this meeting seems a little thin as compared to previous meetings, but undoubtedly many practitioners were still in military service or adjusting to their former civilian practice. One therefore looks to other sources for information concerning the problems of medicine at this time, and in the *Northwestern Medical and Surgical Journal* are several important items:

1. An editorial on epidemic cerebrospinal meningitis in the Northwest, asking the question whether the cause was atmospheric or due to too much rain and wet weather; and a discussion of typhoid fever as the creation of "ochlesis," (bad ventilation, filth and improper food).
2. A special article by Dr. Thomas N. Chambers of St. Mary's Hospital in London, in which he said that "rheumatic fever is a pleasant disease—I mean for the doctor to treat though not for the patient to bear. It is pleasant for him to treat it, because he then feels himself strong and useful. He can, by the judicious exercise of his art, insure the sufferers against several perils to which the nature of their complaint normally subjects them—again he can save them much pain—he can shorten the normal duration both of



the illness and of the convalescence. . . . It is a pleasant disease to lecture about because of its uniformity and requires no modification of the usual standard therapy."

3. Editorials on, "Is Camp Fever Typhoid Fever?"; "Malaria—An Enemy in the Camps," which emphasized the disease as more dangerous than all the physical forces that the rebels could bring to bear against the loyal troops.

4. There was a warning by Surgeon General W. A. Hammond that the injudicious use of calomel and tartar emetic was doing much more harm than good.

While there were no statistics published concerning contagious diseases in Chicago itself, smallpox and erysipelas were reported prevalent at Camp Douglas.

1864

A Symposium on "Cerebrospinal Meningitis or Spotted Fever (like Typhus?)" was presented at the annual meeting of the State Society. An epidemic of fifteen months' duration in Morgan County was reported by Dr. R. E. McVey of Waverly, and Dr. J. Adams Allen of Rush Medical College gave a comprehensive report on a personal experience of not less than 1000 cases. He noted that the prevailing epidemics usually were denominated as spotted fever; that the first epidemics occurred in Michigan in 1847, 1848 and 1849, and subsequently in five states in the Northwest.

The Committee on Medical Practice, Dr. N. S. Davis chairman, emphasized the clinical value of potassa, particularly in paralysis in children. Reports were given on blood poisoning, although the bacterial nature was not known. The introduction of the use of bromides, iodide of lime, sulphates of soda and lime, and the permanganate of potassium was discussed.

Many articles appeared in the *Northwestern Medical and Surgical Journal* from 1862–64: "Rambles in Military Hospitals" by several authors; "Trichiniasis in Germany"; "The Use of Male Fern in Tapeworm," "The Taenicide Properties of Pepo (pumpkin seed)," and publication of a Code of Ethics.

Severe epidemics of smallpox, erysipelas, measles and pneumonia were reported from Chicago.

1865

The annual meeting of the State Society was the occasion of another public address by Dr. N. S. Davis on the "Nature of Medical Science and its Relation to the Community." Following are some pertinent extracts:

"The true nature of medical science and its relation to the welfare of civilized communities is, perhaps, less understood than that of any other important department of human study. Many seem to regard it as little more than a collection of theoretical dogmas in regard to the nature of diseases and the mode by which

medicinal agents can effect a cure. Hence they speak of *systems* of medical practice, viz., Botanic, Eclectic, Hydropathic, Homeopathic, Allopathic, etc., thereby clearly indicating their belief in the idea that all diseases are governed by some one law or hypothetical rule; and that all remedies are to act in accordance with some correspondingly general principle. Many more seem to regard all medical knowledge as a kind of intuitive mystery capable of being acquired and understood by certain individuals without any regard to their previous mental discipline or acquirements. . . . Few appreciate the art of curing or mitigating diseases rests directly on pathology and materia medica. . . . There is not a single department of natural science or philosophy that does not contribute to or constitute a part of medical science. . . . A knowledge of the nature and influence of climate, topography, season of the year, diet, drinks and mental habits are as essential to the enlightened physician as are a knowledge of anatomy, physiology, etc. . . . The science and art of medicine may be defined to be the application of the facts and principles embodied in the various departments of natural, economical and *metaphysical* sciences to the elucidation, prevention and cure of diseases."

There was general discussion by the Society on such topics as hygiene and sanitation, the need for postmortem examinations, registration of all births, marriages and deaths, education, and the evil effects of alcohol and tobacco.

Dr. N. Wright of Chatham recommended the use of acetate of potash—1 dram to the pint two or three times a day, in addition to mercury and quinine, to insure greater success in treatment. In his opinion this seemed to clear the body of harmful nitrogenous waste materials through the kidneys which "are the sewers of the blood."

Several articles published in the *Northwestern Medical and Surgical Journal* were of general interest: "The Uses of Sugar and Lactic Acid in the Animal Economy" by Dr. Samuel Jackson of the University of Pennsylvania; "Importance of the Application of Physiology to the Practice of Medicine and Surgery" by Dr. E. Brown-Sequard before the College of Physicians in Dublin; "Last Hours of Abraham Lincoln Including Autopsy Findings" by Dr. C. S. Taft, Acting Assistant Surgeon; "Cerebrospinal Meningitis" by Dr. Ephraim Ingals of Illinois, and several articles concerning diabetes mellitus and its treatment.

1866

The Committee on Medical Practice of the State Society reported that the two most important diseases in 1865 were cerebrospinal meningitis and erysipelas.

Dr. J. S. Jewell of Chicago gave a long and scholarly dissertation on cerebrospinal meningitis, with a history of its occurrence in foreign lands and in other parts of the United States, together with symptoms, usual course and duration, mortality and postmortem findings. Dr. Jewell enumerated the theories concerning its etiology as age, heredity, epidemiology.

He posed the question: "Is the disease *sui generis* not a form of typhus as is claimed by some?" He believed it was definitely *not malignant scarlet fever* but probably due to a special external epidemic caused through air contact—contagious rather than infectious. His suggested treatment was not specific and included sedatives, venesection, cold applications, belladonna, opium, quinine, aconite, veratrum, strychnine, and alteratives such as iodides, bromides, potassium, emetics, purgatives and others.

Dr. William H. Veatch, Pawnee, discussed a disease which had been epidemic from 1864 to 1865 and implied a "double character" to the condition which he felt probably to be typhoid but with some few cases complicated with malaria (typhoid-malaria). He decried the use of calomel, emetics and powerful diuretics but had good results with rest, opium, hyoscyamus, fluids and enemata.

Dr. N. Wright, Chatham, read an informal essay on cholera, which he considered to be of miasmatic origin. Dr. D. B. Trimble, Chicago, raised the question as to whether it was transmissible and whether quarantine was necessary.

Dr. J. H. Hollister, Chicago, gave a lengthy report on "Bromine and its Compounds," including pharmacology, forms of administration and physiologic effect of sedation. He considered its chief use to be in functional rather than in organic disease, but stated that it was valuable in whooping cough, frequency of urination, epilepsy and tetanus.

Dr. Ira Hatch described ammonium bromide and its value in allaying irritation and procurement of sleep.

The *Northwestern Medical and Surgical Journal* published an important article by Dr. E. C. Seguin, New York, on "The Use of the Thermometer in Clinical Medicine as a Means of Diagnosis and Prognosis."

Of the 1581 cases of cholera reported in Chicago there were 970 deaths.

### 1867

There was a heated debate among the physicians attending the annual meeting of the State Society on the advisability of eating fresh fruit during the season when cholera was prevalent. The final decision was that "moderate use of ripe fruit taken at ordinary meals is not objectionable." The cholera epidemic which had swept through the city of Chicago lasted from July to November, 1866, with the following incidence:

July . . . . .	1
August . . . . .	215
September . . . . .	268
October . . . . .	1082
November . . . . .	15
Total cases . . . . .	1581



The largest number of cases reported on any one day was 175 on October 10th. Of the number of persons attacked, 970 died, or a mortality of 1 in 206 of the inhabitants, and the number of those attacked was 1 in 126. Dr. W. R. Marsh of Chicago, who presented this report, stated: "I am unable to perceive, from a somewhat careful perusal of the literature of this disease, that any very marked changes in the mode of treatment have been proposed, or attempted with unusual success, in this epidemic, either here or elsewhere. Nor, in the pathology of the disease do I see that the profession have made undoubted progress of great magnitude, even since the epidemic of 1831-32. . . . We have learned that proper sanitary and hygienic measures are competent to deprive the cholera of its terrors almost as certainly as has vaccination those of smallpox."

At this same meeting Dr. Hosmer A. Johnson gave demonstrations of tracings of the pulse in various diseases with Marey's sphygmograph.

The Chicago Board of Health was recreated during the year.

1868

The third epidemic of cholera was on the wane in Illinois by the time of the annual meeting of the State Society and Dr. N. S. Davis gave a lengthy report on its pathology and treatment. He stated that the specific cause of cholera was still a mystery; "probably highly poisonous organic bodies developed in the gastric and intestinal evacuations of patients; capable of being transported from place to place by such evacuations either freshly voided or adhering to clothing or by diffusion in the soil when there is a water bearing stratum near the surface." He did not think that "vibriones of various sizes seen under the microscope" were specific cholera poisons. Pathologically, Dr. Davis felt that there was "a direct diminution of that elementary property of living matter which I call 'vital affinity' coupled with impaired contractility or partial paralysis of the capillary vascular system, or more properly the arterioles, and a special sensibility of the mucous membranes of the alimentary canal. . . . Exhaustion of the watery and saline elements of the blood, as leaves the whole mass viscid and un-oxygenated constituting the *stage of collapse*." He advocated increase of vital affinity and vascular contractility and diminution of morbid sensitivity of stomach and bowels, *but he did not say how*.

An excellent supplementary report of the Committee on Medical Practice was presented by Dr. E. P. Cook of Mendota on the effect of soil, winds, rainfall and temperature. He noted that prevalent diseases during the past year had been chiefly inflammatory, becoming more common than formerly, and that their cause was so obscure and treatment so empirical that there was opened a wide and fruitful field for *critical* investigation.

An innovation in the *Northwestern Medical and Surgical Journal* was a

collection of many quotations and abstracts from various sources here and abroad. Under the heading of "Loot," there was material presented on syphilis, progressive paralysis of the insane, phosphorus and fat deposition, pathogenesis of tubercles, experimental physiology, and the specificity and virulence of tuberculosis.

The pocket clinical thermometer, which had been brought out by Dr. Clifford Allbutt, was gaining in popularity and general use.

Routine meat inspection was first instituted during this year at the Chicago Stock Yards.

1869

The annual report of the Committee on Drugs and Medicine of the Illinois State Medical Society was given by Dr. N. S. Davis, chairman, who said: "There is a rapidly increasing tendency on the part of pharmacutists to manufacture and urge upon the public and the profession, *proprietary compounds* such as elixirs, concentrated powders, fluid extracts, etc. And in the opinion of your committee the members of the profession have been too ready to adopt and use such preparations in practice. In the opinion of the committee this has been a prominent evil: (1) The use of such compounds, instead of the official articles of the pharmacopoeia, destroys all uniformity in the use of drugs by different practitioners and makes it extremely difficult to compare the results of medication in the same forms of disease by different practitioners; (2) no security for the continued uniformity in the strength of such compounds; (3) the use of such compounds by the practitioner gives the manufacturers and druggists greatly increased influence in imposing them on the community as *popular remedies*, and (4) their use by the physicians tends strongly to beget carelessness in prescribing, that is, carelessness in adjusting the exact proportion of each ingredient in a compound prescription to the condition of individual patients. The true duty of the pharmacist and druggist is to furnish the profession with individual articles of the *Materia Medica* in their purest, most concentrated and most convenient forms, leaving the physician to combine them to suit each of his patients."

The committee reported also on purified opium (morphia narcea and codeia of the opium with thebaine, papaverine narcotine and woody fiber excluded); sweet quinine (mixed with licorice for children); carbolic acid, ozonic ether, hydrogen peroxide and infusion of chestnut leaves for whooping cough.

A supplementary report of the committee was presented by Dr. E. P. Cook in which he said: "An indication of progress is the increasing interest in comparative pathological investigations and their close relation to and as an aid in the study of the same process in Man."

Several informative items were presented to the membership at this meeting: (1) that there had been much sunstroke during 1868; (2) that typhomalarial fevers were epidemic and these were considered to be typhoid fever mixed or much modified by malarial and scorbutic influences; and (3) scurvy was said to be due to the "want of a proper admixture of succulent vegetables in our food." In the treatment, dietetic measures were thought to be most important. Potassium acetate and potassium chloride mixtures were prescribed. A Civil War soldier wrote to a friend at home and appealed as follows: "For God's sake, send us something to prevent the scurvy. Give us liver and onions—one and inseparable, now and forever."

The "New Nomenclature of Diseases," adopted by the Royal College of Physicians of London, was said to be of such merit as to demand recognition throughout the medical world.

Dr. D. L. Jewett of Watseka reported 200 cases of scarlet fever, with a mortality of 6 to 10 per cent divided as follows: simplex 75, anginosa 112, maligna 13. He warned of the sequela of nephritis. He further called attention to a mild epidemic of measles with slight mortality and duration of 8 to 16 days.

The first Chicago milk inspection took place during this year.

#### 1870

Dr. James S. Whitmire of Metamora reported for the Committee on Medical Practice at the annual meeting of the State Society. He stated that there had been much typhomalaria in 1868 due to heavy rains and excessive heat. The committee suggested that bloodletting was not necessary in pneumonia: "It is too expensive to the constitution and the advantages gained over the disease are not equal to the waste. It robs the blood of its vivifying and nutrient materials and lowers resistance." *Veratrum viride* was favored over bloodletting.

Dr. Charles Hunt of Dixon, chairman of the Committee on Drugs and Medicine, reported that chloral hydrate had been introduced as an excellent and safe hypnotic; that belladonna was recommended in obstinate constipation; that potassium bromide was recommended in diabetes, and carbolic acid, both internally and externally, was recommended in cancer.

The following articles appeared in the *Northwestern Medical and Surgical Journal*: "A Glance at the Rise and Progress of Cell Theories: The Cell Theories of Huxley and Virchow" by Dr. I. N. Danforth of Chicago; "The Use of *Veratrum Viride*" by Dr. Z. C. McElroy of Janesville, Ohio; "Medical Domain of the Turkish Bath" by Dr. J. E. O'Brien of New Jersey. There was also published an editorial on "The Origin, History and Therapy of *Trichina Spirales*" and an article on "Pathogenesis" by Dr. Jules LeMaire



of France, in which he posed the query: "Are typhus, cholera, plague, yellow fever, dysentery, intermittent fevers and hospital gangrene due to infusoria which perform the function of ferments?"

The first milk ordinance for Chicago was passed during this year.

## 1871

A discussion on the differential diagnosis of acute phthisis and typhoid fever was presented by Dr. L. J. Woolen at the annual meeting of the State Society.

Dr. N. S. Davis presented the medical uses of carbolic acid internally in infantile diarrhea, all forms of intestinal flux, epidemic cholera, dysentery, typhoidal types of fevers, all forms of angina, scarlet fever and diphtheria, and some forms of carcinoma.

## 1872

The members attending the annual meeting of the State Society heard Dr. I. N. Danforth lecture on "Disease Germs—Theory?" It is interesting to note that Dr. Danforth accepted the germ theory as early as 1872 but physicians generally were slow to follow him.

Also at this meeting Dr. N. S. Davis attacked the idea of specificity in disease. He did a good service in opposing extremists or enthusiasts in regard to this new theory.

While there was no complete report from the Committee on Medical Practice because of the Chicago fire, Dr. T. D. Washburn of Hillsboro made a personal report, largely on the use of various drugs for therapy. He urged "moderation, carefulness and discrimination in prescribing." He stressed that "there are two types of prescriptions not desired: bold, rash, reckless versus foggy, fossil, antediluvian." He said that "the light is steadily increasing, which makes more hideous and repulsive the tricks and shams of charlatanism. Let us be true to ourselves, humanity and God."

## 1873

Reports were given at the meeting of the State Society on various drugs and medicines, galvanotherapeutics, the incidence and treatment of cerebrospinal meningitis, and the chief cause of phthisis in New England.

In the publications, "Myxedema" was described by Dr. Gull, and Dr. F. C. Curtis wrote about "Thermometry in Health and Disease." He felt that fever in many cases was a safer guide than anything else and he summed up in a sentence the valuable points of the thermometer: "It shows existence of febrile exacerbations; is premonitory of change in the course of a disease; helps in diagnosis, prognosis and treatment, and its indications are uninfluenced by any outside circumstances whatsoever."

Dr. S. P. Breed reported for the Committee on Medical Practice, covering the use of muriatic acid in the treatment of continued fever and pneumonia.

During this year, a "Manual of Thermometry" was published by Dr. Edward Seguin of New York; Dr. James Nevins Hyde, dermatologist of Chicago, expounded on the unity or duality of syphilis; articles were published on "Civil Malpractice" by Dr. M. A. McClelland of Knoxville, Illinois. Chicago reported 48 cases of cholera and 517 cases of smallpox.

1874

"Progress of Medicine" was discussed by Dr. Norman Bridge of Chicago at the meeting of the State Society. Dr. J. Bartlett, also of Chicago, described "Aqueplants in River Bottoms and their Genetic Relations to Malarial Disease," and Dr. Carter Smith, Middleport, Ohio, delivered an address on "Digitalis, Cardiac Sedative and Stimulant."

A new pest-house was completed in Chicago during this year.

1875

Medical education continued a topic of major concern and Dr. J. H. Hollister of Chicago, speaking at the annual meeting of the State Society, discussed at length the preparation for medical training, hospital service and ward teaching. He stated that the high calling of the medical profession deserved congratulations and could be proud of "the auspicious planting of medical science and of medical institutions in Illinois."

At this session the practice of bloodletting was subject to much debate. While the protagonists were very vociferous, they made up a small minority.

Dr. Joseph W. Freer introduced the subject of direct transfusions of arterial lamb's blood versus the indirect transfusion of defibrinated human blood. He called attention to severe reactions with arterial lamb's blood and gave a demonstration.

The Committee on Medical Practice reported upon the occurrence and treatment of pneumonia and inflammatory rheumatism.

Other interesting subjects were presented; for example, the control of the spread of scarlet fever was discussed by Dr. J. P. Walker of Mason City, Iowa; Dr. J. O. Heyworth of Jerseyville, Illinois, again spoke of the therapy of whooping cough; Dr. I. N. Danforth described the use of the microscope in daily practice, and there was general discussion of the value of palpation and percussion in physical diagnosis.

Contagious and infectious diseases still predominated in the practice of medicine, as evidenced by Dr. Hosmer Johnson's report of 283 cases of phthisis and Dr. E. W. Gray's statement that smallpox, *a major exanthem*, was caused by a specific virus and could be prevented, although there was

no cure for it. Chicago reported 15 cases of smallpox, this low figure undoubtedly being due to the increasing number of vaccinations in that city.

Articles were appearing in publications on the germ theory and the discovery of bacteria, as noted by the following quotation from the *Medical Times*: "It must be conceded, however, that, so far as most of the forms of bacteria are concerned, investigation shows that, if they are not received in too overwhelming quantity, the healthier organism offers them an almost absolute resistance. Proof is also available, in the case of many diseases, for the assertion that *those only* are attacked by the disease who were sick already."

1876

Dr. Hollister again discussed medical education before the State Society. He said that there were too many intelligent quacks and ignorant regulars and that there was a great need for many reforms. He discussed cheap schools versus the best schools, lay education, the use of patent medicines, better licensure regulations, registration of births and deaths, creation of a State Board of Medical Examiners, and selection of coroners from among the physicians. He advised legislation providing that physicians' bills be made a privileged account and that court testimony be paid for in advance except *pro bono publico*. He stressed the need for state and county boards of health with doctors in control.

The Committee on Medical Practice reported that epidemics of scarlet fever, puerperal fever, erysipelas, rubeola, diphtheria and dysentery had been widespread in 1875.

There was considerable discussion on scurvy, the significance of the crepitant râle, the cure of acute rheumatism with salicylic acid, and Dr. J. S. Billings, Surgeon General of the United States, reviewed the cholera epidemic of 1873. Dr. James Etheridge discussed the differential diagnosis of rotheln, measles and scarlet fever.

An excellent history of "Early Medical Chicago," by Dr. James Nevins Hyde of Chicago, appeared in the *Northwestern Medical and Surgical Journal*.

Chicago this year reported a severe epidemic of scarlet fever.

The practice of medicine was to be markedly effected in future years by one event of this year, namely, the invention of the telephone by Alexander Graham Bell.

1877

The annual address was given by Dr. T. D. Fitch of Chicago in which he noted the advantages of organized effort, the necessity for good citizenship, the advantage of joining some medical society, and he made a plea for physicians to cultivate association with their colleagues.

The Committee on Medical Practice reported on the theory of a specific etiologic agent for each disease.



There was a discussion of *empiricism* and the need for experimental support.

Treatment of erysipelas by subcutaneous injections of carbolic acid was described by Dr. J. S. Whitmire of Metamora, and Dr. R. G. Bogue from the Cook County Hospital reported on 15 cases of tracheotomy in diphtheritic croup with 6 successful results.

On January 25th of this year, one hundred medical men met with counsel at the Grand Pacific Hotel in Chicago to consult with the Health Commissioner of Chicago concerning the prevalence of scarlet fever and diphtheria and the resultant mortality. There was little discussion of treatment, the debate being almost entirely confined to the question of prophylaxis, by both hygienic and medical means. It was the consensus not to issue a formal statement positively declaring that prophylaxis by internal medicine was both valueless and possibly injurious. A committee was appointed and strict rules were adopted and put into effect relating to quarantine, care and fumigation. The following suggestions were made: (1) To report every case to the Health Department; (2) to inquire into the origin of each case, and (3) to take measures to prevent communication between the sick and the well.

Through Dr. John F. Snyder's untiring efforts, the Illinois State Board of Health and Medical Examiners was finally created on May 21, 1877, made up of Drs. J. H. Rauch, William Chambers, A. L. Clark, H. Wardner, R. Ludlam, J. M. Gregory and Newton Bateman. The Board, as organized, made licenses mandatory for the practice of medicine, in spite of the fact that Dr. Snyder and many other doctors were thoroughly opposed to licensing on the grounds that this formed an opening wedge to state medicine.

The first audible reproduction of recorded sound was accomplished by Thomas A. Edison in 1877.

1878

The Committee on Medical Practice of the Illinois State Medical Society reported 4446 physicians registered in the state. The committee also made a plea to the Governor to give fuller recognition to regular practitioners on the State Board of Health with the suggestion that no one particular school of medicine should have a majority on the Board. It was also noted that in other states all members of similar boards were physicians and that the value of lay members on such a board was questionable.

This committee took cognizance of the development of "isms" in medical practice and reported the apparent decline in use of drugs by doctors. In its report on malaria the committee asked, "What is it?" The statement was made that "intermittents" cause some undetermined poison that produces paresis of ganglionic nerves of the solar plexus. Morphia by hypodermic to

relieve paroxysms was suggested, to which there was serious objection by Dr. N. S. Davis.

A lengthy report on croup was presented, as well as one on exophthalmic goiter in which the cause was attributed to a preponderance of alterations in ganglia of sympathetic nerves. It was stated that "almost every drug known has been used." Rest, sedation, ergot, nutrition, tonics and galvanism were suggested as treatment.

A famous case report was published by Dr. H. Hammer of St. Louis on "A Case of Thrombosis of One Coronary Artery Diagnosed Antemortem and Proved at Autopsy."

Chicago reported an epidemic of whooping cough, with 53.8 deaths per 10,000 population—an unprecedented high.

An article under the heading "Medical News and Items" appeared in the *Chicago Medical Journal and Examiner* which read:

"The Phonograph opens up a vista of medical possibilities delightful to contemplate. Who can fail to make the nice distinction between every form of bronchial and pulm râle, percussion, succussion and friction sounds, surgical crepitus, foetal and placental murmurs, and arterial and aneurismal bruit, when each can be produced at will, amplified to any desired extent, in the study, the amphitheatre, the office and hospital. The lecturers of the future will teach more effectually with this instrument than by mouth. The phonograph will record the frequency and characteristics of respiratory and muscular movements, decide as to the age and sex of the foetus in utero and differentiate pneumonia from phthisis. It will reproduce the sob of hysteria, the sigh of melancholia, the singultus of collapse, the cry of the puerperal woman in the different stages of labor. It will interpret for the speechless infant, the moans and cries of tubercular meningitis, earache and intestinal colic. It will furnish the ring of whooping cough and the hack of the consumptive. It will be an expert in insanity, distinguishing between the laugh of the maniac and the drivel of the idiot. It will classify dysphagic derangements, such as ataxic, amnesic, paraphasic akataphasic aphasia.

"It will recount, in the voice and words of the patient, the agonies of neuralgia and renal calculus, and the horrors of delirium tremens. It will give the burden of the story of the old lady who recounts all the ills of her ancestors before proceeding to the era of her own. More than this, it will accomplish this feat in the ante room, while the physician is supposed to be busying himself with his last patient."

1879

The annual address by Dr. E. P. Cook of Mendota was a short history of the State Society. Dr. Cook made a plea for complete membership on the basis that "in union there is strength." He urged a longer period of training for medical students with needed clinical experience added, the adoption of the metric system, the control of pharmacists, and regulation of laws. He also reported that a National Board of Health had been organized, and made the following recommendations: that Illinois organize county boards of health, have fewer medical schools, adopt the highest attainable stand-

ards for these few medical schools which should be "separated by insurmountable barriers from all and every sectarian church, or political or selfish influence." He advised that every candidate pass an examination given by a board of medical men entirely dissociated from every school furnishing medical instruction. He felt that in this way a great and needed improvement would be inaugurated, the profession would stride forward an entire generation in a day and would take its position in the world as the highest and noblest of the calling of men.

There had been many articles on climatology and disease in the literature over the preceding 25 years, with the conclusion that the most healthful climate, as a rule, contained qualities of equable temperature, moderately warm or cold, moderate dryness, an abundance of sunshine, strong electric tension and considerable free ozone; sufficient winds to assist in removing impurities; the contour of the land and the nature of the soil favorable to prompt drainage; moderate rainfall; the presence of bodies of water, and proximity to forests. Points regarded universally as injurious were decided humidity, lowness of lands, especially if the soil was marshy or clay-like in nature. Questionnaires sent to over 200 physicians showed that many thought that there were effects produced by electricity or magnetism in some ozonal influence, and that there was high humidity in association with low barometer and/or some occult influence during storms.

Dr. J. M. Everett of Dixon offered studies in relation to the production of pain by weather, particularly during storms.

A milestone in medical history occurred during this year: Dr. Christian Fenger of Chicago demonstrated the bacterial nature of acute endocarditis, the first such demonstration on this side of the Atlantic Ocean.

1880

A certain amount of repetition occurred in the presentations before the State Society; for example: (1) Dr. T. Worrell of Bloomington continued to defend the value of bloodletting in the treatment of the acute phase of pneumonia; (2) Dr. F. C. Hotz of Chicago commented upon the value of salicylic acid in rheumatic diseases, and (3) Dr. J. H. Hollister made a plea for the support of the Society in securing the adoption of the metric system in writing prescriptions. Dr. H. Z. Gill of Jerseyville read a paper on "Identity or Nonidentity of Membranous Croup: and Diphtheria: The Diagnosis and Cure"; this work, of course, was done without benefit of bacterial studies.

The Committee on Medical Practice reported an epidemic of mumps, and then went on to discuss the value of inhalations in the therapy of pulmonary disease, tracheotomy for relief of croup and laryngeal diphtheria, air contamination, and the problems of sewage.



In 1880, Laveran of France discovered the parasites of malarial fever and Eberth of Germany discovered the typhoid bacillus.

Chicago, in this year, reported a diphtheria death rate of 290.7 per 100,000 population.

1881

At the meeting of the State Society there was a general discussion of the Medical Practice Act, legal medicine, and further society organization, particularly in the southern half of the state. A plea was made for better communication with several counties and for better reporting of epidemics.

The Committee on Medical Practice reported an epidemic of rubeola in every district. Some physicians objected to the division of measles into two types; they "just considered German or bastard measles as a hybrid form of morbilli." There were two reports on measles: one by Dr. Charles Warrington Earle of Chicago, and the other by Dr. Roswell Park, also of Chicago, who reported 100 cases of measles in an orphan asylum.

The Committee also reported that variola occurred in Chicago and in the central part of the state (Warren, Pike, Fulton, McLean and Schuyler Counties) to a greater extent than in any previous year; this condition showed a marked tendency to spread and high mortality rate. The Committee stated: "The general susceptibility to revaccination has been unusual. The demonstrated protective power of recent vaccination is renewed evidence, if it were at all questionable, of the worth of this great boon to humanity."

Dr. Washington West of Belleville made a special plea for retention of the name "typhomalaria" and for the recognition of the existence of the disease, regardless of the demand by many physicians that the two diseases be separated.

Dr. J. H. Hollister of Chicago presented "Abnormal Thermal Conditions in Diseases and the Means of Controlling Them." He considered the physiology of heat production, dissipation, conservation and effect of excessive heat upon animal economy, with a final discussion as to means of controlling or preventing excessive temperatures. This address was scholarly and orderly; it included references to metabolism, oxidative processes (including cell activity), vasomotor actions, the effect of sympathetic nerve action, and environmental factors. Dr. Hollister explained that excessive temperature was prevented by (1) lessening generation of heat, rest, withdrawal of food stimulants as far as possible, cardiac sedatives for the control of nervous excitement to the end that molecular actions may be reduced to their minimum; and (2) facilitating its dissipation by a rapid lowering of temperature of the body surface, use of remedies to promote surface circulation, promotion of perspiration by stimulation of sweat glands, and bloodletting in emergency. He suggested various agents for the control

of pyrogenesis and dissipation of heat: (1) sedative influence of tartar emetic, known favorably as a powerful agent; (2) veratrum, a powerful cardiac sedative said to reduce temperature 1-3°F; (3) chloral hydrate in 40 to 80 grain dose, said to lower temperature 3-4°F., to paralyze vasomotor centers and to lessen heart action; (4) salicylates and salicin in inflammations; (5) aconite, "coming to be ranked among the most prominent agents for heat dissipation in febrile cases. . . . Its efficiency in arresting inflammatory processes can hardly be estimated. . . . Probably homeopathy is more indebted to this simple remedy for what it may claim of success in the treatment of acute diseases than to all other remedies combined. . . . Aconite lessens heart action, relaxes arterioles, doubles the capillary volume and thus, while removing blood pressure, it drains away the blood from parts that are over-congested, and not only lessens the temperature but prevents mischief that might otherwise ensue." (6) Administration or use of quinine.

A paper on "The Present Status of Specialism in Medicine and Surgery" was delivered by Dr. A. Reeves Jackson, Chicago. He referred to the passing of the "family doctor" and the advent of the specialist. Dr. Jackson favored specialism and said that its rise was the result of: (1) a multiplicity of professorships in medical colleges and deficient medical education. He said that several schools had established postgraduate courses, and he questioned their adequacy; they presented lectures and demonstrations only but gave no practical work to develop skill. Schools, he said, did not normally provide what they knew their pupils needed most, namely, clinical experience. (2) Success in medical teaching, supplementing the lack of practical training in the college curriculum, and meeting the growing demand evinced by the public and the profession for special medical and surgical skill. Dr. Jackson stated: "We must concede need of specialism; were it not for the special worker the profession would go backward, nay, never would have gone forward. . . . Many self styled specialists are *not qualified* by diligent study, knowledge or experience. Again certain young inexperienced persons, who, at the beginning of their professional life, herald themselves as specialists, and who, by claiming to treat a certain class of diseases only, convey the implications that they are enabled to effect unusual results. They seldom redeem such promises. The claim to superior special skill is only a cunning device to attract attention and to catch the unwary." (3) Many advances and discoveries of modern specialism, as to etiology, understanding of particular diseases as well as proper treatment, and (4) obligations of the medical profession and the public to specialism.

Coincident with this, there appeared the following editorial in the *Northwestern Medical and Surgical Journal* on "General Education as Preparatory to Medical Studies": "The necessity for a reasonable amount of

mental development and discipline and the advantages to be derived from a fair knowledge of the common branches of education including mathematics, physics and natural sciences before entering upon study of medicine are too obvious to require either argument or illustration. It is well known that a large number of those who enter upon the study of medicine in this country have neither the mental discipline nor the knowledge just alluded to. Only a small number of the colleges enforce any rule on the subject. Of all the defects in our system of educating men for the practice of medicine and surgery, none is greater or productive of more injury to the community and to the profession itself, than this want of preparatory knowledge and discipline on the part of those who enter it."

During this year, Dr. N. S. Davis offered a course in Examination of the Sick at the Chicago Medical College.

Dr. H. Gradle, Chicago ophthalmologist who had a keen interest in general medicine, spoke on "The Inoculability of the Tubercle." He postulated that the human tubercle could be inoculated successfully in lower animals if introduced under the skin or in the peritoneal cavity. He said this would lead to local eruption of tubercles, leading ultimately to general tuberculosis, while intravenous injection would produce generalized (miliary) tuberculosis only. Dr. Gradle pointed out that in animal experiments, sputum, tubercles, caseous masses and scrofulous discharges had been used successfully, and that Dr. Cohnheim had produced tubercles by injection of tuberculous masses into the anterior chamber of the eye.

The Committee on Medical Practice discussed winter cholera as a new disease in epidemic form, chiefly in the North and in densely populated cities. Its course was said to have a sudden onset, no fever, profuse serous discharges; it was usually painless although cramps had been noted, and its duration was one to two weeks with possibility of relapse following indiscretions in diet. Its cause was as yet unknown. Its pathology was thought to be follicular enteritis. Few deaths were reported, and the suggested treatment was dietetic, with the addition of anodynes and astringents. The committee called attention to the possibility that this comparatively benign disease might be the precursor of serious gastro-intestinal disease should the transition to a hot summer be sudden.

This committee reported that "Chicago Sewage and How to Dispose of It" was attracting wide attention. The situation, they pointed out, had been settled for the time being by making Lake Michigan and the Illinois canal the great cloaca, which passed the *complex fluid* to the Illinois and Mississippi Rivers, thus contraverting the sanitary dictum—"the rainfall to the rivers and the sewage to the land." It was the opinion of the committee that the method of disposal of Chicago sewage used at that time would have to be replaced by an improved one.



Even during those days, strong articles appeared from time to time in the press in opposition to vivisection of animals.

Dr. C. W. Purdy of Chicago made a plea for cremation on the basis of economic advantage and the absence of danger from disease.

Dr. Charles Warrington Earle of Chicago (of the Washingtonian Home which still operates) spoke on "The Etiology and Treatment of Inebriety."

Chicago again was having a serious epidemic of smallpox: 2997 cases reported with 1180 deaths.

1882

The Committee on Medical Practice reported that because of the severe epidemic of smallpox in Chicago during the previous year, vaccination was ordered for all public school children throughout the state. The reaction of public and press was reported to complications of vaccinia from the use of bovine virus. There was much discussion of the type and quality of the virus.

The Committee also reported the unsuccessful, although not altogether fruitless, search for the supposed malaria germ. *Bacillus malaria* and parasites were suspected. It was pointed out that Laveran's bodies were pigmented and variable. The old argument as to typhomalaria continued: is it typhoid complicated with malaria or *vice versa*, or are they totally separate diseases, rarely occurring together?

That the Committee was devoting attention to unusual diseases and variants is shown by the queries: Is croupous pneumonia a local inflammation or a general zymotic disease? What is the *modus operandi* of antipyretic drugs? What is their therapeutic value in fevers?

The smallpox epidemic was still raging in Chicago; 3611 cases were reported, with 1292 deaths.

1883

Drs. N. S. Davis, J. H. Hollister, David Prince, E. P. Cook and Ephraim Ingals *still* advocated bleeding in the first stage of pneumonia.

Dr. Davis argued against the tubercle bacillus as being the cause of tuberculosis, and in this regard he definitely opposed Drs. H. Gradle and William Belfield.

Also, Dr. Davis raised the question whether internal remedies could affect organisms in the living body, and he presented new methods of administering medicines: by hypodermic and epidermic injection either for the use of a single remedy or for small doses frequently repeated.

The Committee on Medical Practice stated that *aconite* was the best single known remedy, but they also favored *veratrum viride*, gelsimine, ipecac, belladonna, bromides, pilocarpine, podophyllin, calcium, and even some others. The Committee stated its opinion that the new issue of the *Pharmacopoeia* was a great improvement over former issues.

Dr. A. L. Craig, Galesburg, decried the ushering in of the "Patent Medicine Era." As remedies for this situation he suggested education of both the public and the physicians, and exposure and prohibitive legislation.

Dr. C. W. Purdy, Chicago, in a treatise on clinical diagnosis of Bright's disease, followed the old classification of the large white parenchymatous type, the atrophic granular variety and amyloid kidney. He stated: "We do not need microscope or chemistry to make a diagnosis—only careful clinical observation is needed."

Professor S. F. Clevenger of the Art Institute gave an interesting illustrated lecture on "Artistic Anatomy and the Sciences Useful to the Artist."

The total mortality reported for Chicago for February 1883, was 859, of which number 87 were due to pneumonia, 80 to infantile convulsions, 79 to phthisis and 34 to diphtheria.

A sharp debate was current between pharmacists and physicians, to the effect that pharmacists should not prescribe medicines except in an emergency, while physicians should not dispense medicines except in an emergency. Prescriptions, it was felt, should be kept on file by the pharmacist, both for his records and for his protection.

Much was written in medical publications opposing the intervention of the state in medical affairs.

Dr. William T. Belfield, Chicago, delivered the Cartwright Lecture at the College of Physicians and Surgeons in New York in 1883. He accepted completely the causal relation of micro-organisms to disease and was ably abetted by Dr. Henry Gradle.

#### 1884

The annual address before the State Society was given by the President, Dr. Edmund Andrews of Chicago, on "Medical Ethics versus Etiquette of a Professional Man." Three principles of ethics were cited: (1) The physician must bring to his work a thorough knowledge of his profession; (2) he must use this knowledge diligently and honestly for the benefit of his patients, and (3) he must shape his conduct toward his patrons and toward his medical brethren in the spirit of honor, kindness and geniality.

Dr. F. W. Godine, Ancona, wrote an excellent article on the recognition of human parasites, giving the classification, method of infestation, symptoms and treatment.

The Committee on Medical Practice discussed hay fever; reported that "febriculæ" were gradually vanishing due to early and better diagnosis; reported that diseases of the pancreas were more common than was supposed, and presented a demonstration of tests for albuminuria and glycosuria.

Dr. R. H. Babcock, Chicago, spoke on physical conditions essential to the production of tympanic resonance, and listed pathologic states of pulmonary tissues in which this occurs.

Dr. J. M. G. Carter, Waukegan, published a series of articles on "The Medical Botany of Illinois." He noted 670 species representing more than one-third of all the plants in the state. His special plea was for medical schools to offer courses in medical botany.

Dr. Henry Gradle, Chicago, presented a comprehensive paper entitled "Progress of Etiology." He discussed primary diseases, physical and chemical influences and parasites, secondary disturbances, exciting cause and predisposing conditions, and proof of disease of parasitic origin. Dr. Gradle gave as cause and effect reproduction of disease to an extent commensurate with the morbid lesions, and reproduction of typical disease by inoculation with the isolated parasites. Unimpeachable proof of parasitic origin had been furnished in cases of anthrax, tuberculosis, suppuration, erysipelas, trachoma of man, glanders, charbon, chicken cholera, swine plague, and some half dozen experimental affections of animals. Characteristic bacteria had been found in relapsing fever, leprosy, pneumonia, pyemia, typhoid and gonorrhea, but their significance had not as yet been proven experimentally. Organisms of croupous pneumonia had been isolated and reproduced in animals by injection and inhalation. Also osteomyelitis had been reproduced by injecting into bone marrow, cocci recovered from human cases.

The year 1884 was notable for several great scientific advances: Koch discovered the cholera vibrio and confirmed typhoid bacillus as the cause of typhoid fever; Klebs discovered the diphtheria bacillus; Pasteur discovered the hydrophobia virus, and Nicolaier discovered the bacillus of tetanus. Also the etiology of puerperal peritonitis was being actively discussed.

It was also in this year that Dr. N. S. Davis of Chicago, with Dr. A. Jacobi of New York, attended the Eighth International Medical Congress in Copenhagen.

1885

The Committee on Medical Practice of the State Society discussed many topics:

(1) Hydrochlorate of cocaine, a new local anesthetic; (2) the certainty that typhoid must be caused by an organism, Dr. Norman Bridge, Chairman of the Committee, pointing out that much effort was being expended in attempting to discover some means of aborting the disease; (3) the belief that it was not necessary to reduce fever except when it was exceptionally high; (4) the doctrine of contagiousness was more firmly established in tuberculosis; (5) comma bacillus as a constant accompaniment of cholera.



Dr. Bridge said that Koch had fulfilled all of his postulates experimentally and otherwise; therefore, it must be the cause. (6) Recommendation of intubation of the larynx with special tubing which was thought to be superior to tracheotomy; (7) trypsin as a solvent for diphtheritic membranes, used every few minutes as an atomized spray consisting of trypsin, glycerine, soda and water; (8) refusion or injection of a saline solution into the veins and arteries as a substitute for transfusion of blood. The Committee seemed to favor the use of arteries rather than veins, and the inhalation of atomized blood, as well as subcutaneous injection of blood, for nutrition. It was often used in this century to increase coagulability of blood. (9) Methods designed to achieve *palatable therapeutics*.

Dr. C. Truesdale, Rock Island, gave a special report on tetanus (pre-antitoxin days). He recommended debridement, carbolic acid injections and sedation.

There was further discussion in both the Chicago and the State Medical Society regarding preliminary and actual medical education and whether general or special studies in medicine were to be given.

#### 1886

The Presidential Address at the annual meeting of the State Society was given by Dr. J. J. M. Angear of Chicago for Dr. William Byrd of Quincy. Dr. Angear discussed the germ theory and asked whether or not the micrococci or bacteria were the seeds of disease, whether they developed into something else, or whether they were not simply the causes of the "*materies morbi*" of infectious diseases. He suggested that the term "germ" or "germ theory" be abandoned in favor of "*viva causa*," which would express the idea more correctly.

Speaking for the Committee on Medical Practice, Dr. Angear recommended the use of oxygen in pneumonia with cyanosis. He also reported an epidemic of cerebrospinal meningitis.

There was a long discussion on Pasteur's cure for hydrophobia. Doubt was expressed as to his ability to diagnose the disease, although it was admitted that there was something to his theory.

Dr. Robert Babcock, Chicago, described the condition of atheromata of the coronary arteries and its relation to certain cases of cardiac failure. Atheromata, he explained, cause angina pectoris because of acute softening of the heart due to thrombi in hemorrhagic infarcts; also that there is fibroid degeneration of the heart, chiefly at the apex, in consequence of which there is thinning of the wall with the frequent occurrence of cardiac aneurysm.

Dr. T. Janeway, Boston, gave an address on "Pathology" before the American Medical Association which was republished in the *Chicago*

*Medical Journal and Examiner*. He stated that "the study of microorganisms seemed about to revolutionize pathological knowledge," and spoke of the possibility of prevention of disease by inoculation with attenuated viruses or organisms. In his opinion this was no doubt due to the influence of Pasteur's method of treatment of rabies.

Also in this publication, Dr. G. H. Chapman, Grand Crossing, raised the question "Is Diphtheria a Local or General Disease?" Dr. E. Fletcher Ingals gave his opinion as to the cause and cure of hay fever.

Dr. Joseph Zeisler read a paper before the Chicago Medical Society on the "Bacilli of Syphilis and Use of Hydrargyrum Tannicum Oxydulatum." He quoted from Sigmund Lustgarten of Vienna and spoke favorably of the treatment.

1887

Dr. Elias Wenger of Gilman, in his presidential address before the State Society, emphasized the influence of physicians in a multiplicity of enterprises and activities: the systems of sewage and drainage in cities; construction and ventilation of schools, colleges and churches; hygienic and sanitary conditions in hospitals, asylums and prisons, and development of all types of legislation.

Dr. D. R. Brower, Chicago, reported for the Committee on Medical Practice and discussed the dosage of antipyrine or antifebrin, cautioning that this should not exceed 30 grains a day. In a further discussion he pointed out that phthisis had been treated by rectal injections of carbon dioxide and sulfuretted waters, but there was no general agreement by all members of the Committee on this therapy. He reported that urethane and paraldehyde had been approved as hypnotics, and cocaine as a local anesthetic.

There was comment on druggists' use of physicians' prescriptions. It was pointed out that such prescriptions became stolen property, since they were never written for druggists' use to be sold over the counter. It was emphasized that physicians should be guaranteed fairness and honesty in the dispensing of prescriptions, which then should be kept inviolate.

Dr. C. W. Purdy, Chicago, contributed a paper on "Strophanthus," describing its pharmacology and therapeutic value.

There was also a report on the State Vaccine Laboratory, established by a grant from the State in 1885 and located on the campus of the University of Illinois at Urbana.

The *Chicago Medical Journal and Examiner* devoted almost an entire volume to report the Ninth International Medical Congress.

1888

The Committee on Medical Practice suggested the use of sparteine sul-

phate where digitalis was not tolerated, saccharin in diabetes, and sulfonal as a hypnotic. The use of antifebrin was recommended. There was a discussion of achlorhydria in normals and in gastric carcinoma, and pepsin in the treatment of croup and diphtheria was suggested as an agent to dissolve the membrane.

An editorial appeared in the *Northwestern Medical and Surgical Journal* concerning the multiplicity of medical societies. A plea was made for more concentration on the American Medical Association, and the editor decried the formation of so many special societies.

## 1889

The annual address was presented by Dr. Charles Warrington Earle of Chicago. He discussed the responsibilities and duties of the medical profession regarding alcoholic and opium inebriety. He made a plea for practical temperance, pointed to the opium habit then prevalent among army physicians, and stressed the need for a general diffusion of knowledge pertaining to the harmful effects of alcohol and opium and the immense importance of this education for youth. He cautioned that the profession should be temperate and should not prescribe these substances indiscriminately.

Dr. N. S. Davis's report for the Committee on Medical Practice was entitled "Influence of Appreciable Meteorological and Topographical Conditions on the Prevention of Acute Diseases." Twelve years previously, Dr. Davis had devised a system of coincident observations and records concerning the appreciable conditions of the atmosphere and soil and the date of commencement of acute diseases. This work had been done in conjunction with a special committee of the American Medical Association and the British Medical Association.

Dr. F. C. Robinson, Wyand, who was Chairman of the Committee on Medical Practice, noted that: (1) the etiology of disease was difficult and often impossible to determine. It was only a few years since the germ theory had been accepted as a prime factor in the causation of many diseases, but this theory was yet in its infancy. (2) Germ cause of croupous pneumonia had not as yet been proved. Pneumococci were claimed to be the cause, and exposure to cold and wet was said to have a severe effect. Very little advance had been made in its treatment. Dover's powders, antipyrine, veratrum, aconite, poultices, plasters and pneumonia jackets were used. The mortality rate had not materially changed. Venesection was now neglected. (3) A wave of "faith cures" by quacks and fanatics posed a serious problem during 1888 and 1889.

Dr. A. J. Baxter, Astoria, Chairman of the Committee on Disease of the Alimentary Canal, reported that "Advances show benefits of headlights of scientific research over phantom of empiricism," and reveal "the impor-



tance of chemistry, both of the alimentary secretion and of drugs used, as well as microscopy of tissues affected." Dr. Baxter pointed out that dyspepsia, most often due to nervous origin or indiscretions in diet, taxed the ingenuity of the physician. Flatulence, he stated, was due to the "evolution of gasses produced by putrefactive and pathognomonic fermentative changes of the ingesta, wrought by undue multiplication of microscopic vegetations." He discussed the "fermentation taking place in the ingesta, of saccharine nature, and putrefaction in those made up of albumenoid matter. . . . Propagation of pathogenic microorganisms to the extent of interfering with normal digestion, goes on by virtue of altered secretion," and that it was difficult to distinguish between functional and catarrhal conditions. Dr. Baxter questioned the use of *predigested foods, fearing inertia of the stomach*. As treatment he recommended hydrochloric acid and pepsin. He suggested that "could a way be discovered to prepare pancreatine so that the acids of the stomach could not destroy it before it reached the intestines, it would be a very valuable preparation in intestinal indigestion."

1890

Dr. John Wright, President of the State Society, made a very short address on the mission of the medical profession, its duties and the mistakes of some of its members.

Dr. J. M. G. Carter, Waukegan, Chairman of the Committee on Medical Practice, gave a paper on "Pneumonia," quoting freely from Weichselbaum. He stated that bacteria do cause pneumonia, and he separated the pneumonias into lobular and lobar types, both being of anatomic but not of etiologic significance. He described the *Diplococcus* as being the most frequent cause, Friedlander's *Bacillus* but rarely the cause. He discussed the causes of croupous pneumonia and, in his opinion, "Catching cold has only a possible predisposing effect."

Dr. Frank Billings discussed this paper and said: "Personally, I do not think either the Weichselbaum, Fraenkel or Friedlander organism has any specific relation to pneumonia in Man. . . . They are present in the mouths of healthy individuals and do not cause pneumonia, and have also been found attached to the bronchial mucosa of people killed by accident or dying with intact lungs," but he admitted that "when active and prolonged congestion with serous bronchial effusion is present, then they may cause pneumonia." Dr. Billings listed the aims of therapy as: (1) To equalize the circulation and diminish the return of the blood to the lungs; (2) to reduce body temperature; (3) to sustain the patient's strength; (4) to assist mucous membranes and organs of secretion and excretion in the performance of their functions, and (5) to allay pain.

Speaking for the Committee on Medical Practice, Dr. Billings then

entered a plea for a well appointed laboratory for microscopic and physiologic research in Chicago. He emphasized that the united effort of all was needed, and expressed the hope that Chicago might be the seat of such a laboratory before the beginning of the World's Columbian Exposition 1892 to 1893. "A laboratory for medical, physiological, microscopical and scientific investigation, such that our European brothers will realize that we are making rapid strides forward toward the front. Then we may look for help to decide the vexed question of bacteriology and the bacillus theory."

Dr. G. Frank Lydston, Chicago, read a paper entitled "Evolution in its Relation to the Infectious Diseases with Especial Reference to the Local Venereal Affections."

Chicago reported a severe influenza epidemic through the first four months of 1890.

1891

An address on "Koch's Lymph" was presented by Dr. Frank Billings, who, after a long and careful study of the history of tuberculosis, concluded that Koch's lymph, a probable ptomaine, is a product of the bacillus of tuberculosis in pure culture and is the real virus—the *materies morbi*—of tuberculosis. When inoculated into a tuberculous patient, it intensifies and shortens the natural histologic and anatomic changes of the disease, which are manifested clinically by the symptoms and signs attributable to the intensified morbid process. The remedy is a dangerous one but may be successfully used when the necrosed tissue and its contained bacilli can be rapidly and completely thrown out of or removed from the body. In all other instances, the remedy will be of little or no benefit and may do absolute harm by exciting a more acute form of tuberculosis, which may infect the whole body with a tuberculous poison. No evidence exists to support the idea that it may give immunity against tuberculosis. It has value—a dangerous one—as a means of diagnosis in doubtful cases of tuberculosis, but it is of value only as a positive sign. By its discovery and use, Koch has added emphatic and irrefutable evidence that the tubercle bacillus is the specific cause of tuberculosis.

Dr. William E. Quine, Chicago, reported five fatal cases of Charcot's hepatic intermittent fever due to calculi obstructing the end of the common duct. There was intermittent fever, chills, jaundice, pain, digestive disturbance and, in some cases, a distended gallbladder. The cases had to be differentiated from malaria, gastric ulcer and septicemia. The prognosis was bad and all patients died. Dr. Quine disagreed with Dr. Osler that "medical treatment was useless." Dr. Quine used purgatives. Fistulae into the duodenum occurred at times. There was a long discussion of this paper by Drs. N. S. Davis and Frank Billings, and the latter suggested the term

"capillary cholitis" as a pathologic rather than a clinical terminology.

Dr. Everett Brown, Decatur, gave a good paper on "Milk as a Medium of Contagion in Typhoid Fever." He described an epidemic traceable to milk supplied by *one* dairyman, and he gave the *Bacillus typhosis* of Eberth as the exciting cause of typhoid fever. He stated that the germ was derived from a previously existing case of typhoid and never developed *de novo*. Typhoid, he said, entered a man in food or drink, as in milk, water and ice, but never from the air. He considered it a preventable disease, and recommended as treatment complete and thorough disinfection of all the discharges from the patient, and absolute cleanliness.

Dr. Charles Warrington Earle, in discussion of this paper, told of 180 cases of typhoid fever in Cook County Hospital. In his treatment he avoided cathartics and advised rest and a milk diet.

Dr. J. F. Percy, Galesburg, then gave a dissertation on "Should Cathartics Have a Place in the Treatment of Typhoid?" He greatly favored their use.

Chicago reported its highest typhoid death rate during this year, namely 173.8 deaths per 100,000 population.

#### 1892

At the annual meeting of the State Society this year, there was much discussion concerning insanity in general practice. Dr. Katherine Miller, Lincoln, spoke on "Medical Use of Ergot." In a dissertation on "Treatment of Self Limited Diseases," Dr. Carl Black of Jacksonville discussed useless medication, overmedication, promiscuous use of antipyretics, the importance of hygiene, and sanitary protective measures. "Infantile Paralysis" was discussed by Dr. D. R. Brower of Chicago; Dr. E. Fletcher Ingals, Chicago, spoke on "Diphtheria: Empiric Therapy versus Intubation," and Dr. N. S. Davis discussed "Oxygen Inhalations in Respiratory Affections."

Dr. C. Warrington Earle reported an influenza epidemic in Chicago. He told how it affected the respiratory, gastro-intestinal and nervous systems, and called attention to the variation in mortality in different epidemics. He finally asked the rhetorical question, "Does immunity occur?"

Construction of a new drainage canal was started in Chicago. This was to be 281½ miles in length and would be completed in 1899. (It was.)

#### 1893

The annual address at the meeting of the State Society was presented by Dr. J. M. G. Carter, Waukegan, on "Bronchitis and its Relation to Bronchopneumonia and Other Diseases of the Respiratory Organs."

Dr. Ludvig Hektoen summarized his paper on "Acute Ulcerative Endocarditis: A Brief Résumé of the Pathology of Eight Cases" as follows: The disease is caused by localization of microbes in the blood upon the endo-



cardium. *Streptococcus pyogenes*, pneumococcus, staphylococcus, in the order named, were found most frequently. The experimental disease could be produced by first causing some mechanical or chemical injury to the valve, followed by injection of cultures of various bacteria. Acute ulcerative endocarditis is a secondary lesion in acute infectious diseases, notably pneumonia, meningitis, acute articular rheumatism, specific fevers, gonorrhea and dysentery. In over 50 per cent of cases, the bacteria were implanted upon an old valvular lesion which was roughened due to the absence of epithelium.

Dr. Frank S. Johnson, Chicago, gave a dissertation on "Exophthalmic Goiter" which was discussed by Dr. William E. Quine. "Mucous Colitis" was discussed by Dr. Katherine Miller of Lincoln.

Dr. George W. Webster, Chicago, spoke on "Physiological Action of Alcohol." He described the action of alcohol as a stimulant on the circulation and digestion, and its value as a food. He asked, "How does it lower temperature?"

There were 140 cases of smallpox reported from Chicago, with 23 deaths, and the tuberculosis rate was reported very high.

## 1894

Dr. O. B. Will, Peoria, gave the presidential address on "Vivisection and Animal Experimentation and the Advance of Medicine as a Result."

A paper on "Nucleins and Nuclein Therapy" was presented by Dr. Victor Vaughan of the University of Michigan. He stated that nucleins were wholly free from poisonous effects, that they might cause hyperpyrexia by injections, and that subcutaneous injection of nuclein caused leukocytosis (chiefly polymorphonuclears) in both healthy and tuberculous persons. He pointed out that the increase varied with the dose and the individual.

Smallpox vaccination was discussed by Dr. William E. Quine of Chicago who asked: "When shall it be done? How soon does protection occur? How long does it last?" He spoke of abortive and worthless vaccinations, and cautioned of the danger of erysipelas as a complication of vaccine. He discussed anti-vaccinationists versus the rôle of compulsory vaccination.

Dr. N. S. Davis spoke on "Statistics in Diabetes" and Dr. Frank Billings discussed "Arteriosclerosis."

A severe smallpox epidemic was reported in Chicago: 2332 cases with 1033 deaths in a population of 1,084,400—this in spite of much free vaccination.

## 1895

The presidential address at the meeting of the State Society was an illustrated lecture by Dr. D. R. Brower of Chicago regarding "Some Abnormalities of Physical Conformation Observed in Criminals with Causa-

tive and Corrective Considerations." Other scientific papers presented were "The Present Status of Serum Therapy" by Dr. Robert Ludeking, St. Louis; "Bacteriologic Diagnosis of Diphtheria: The Need of its General Use, the Technique of Examination" by Dr. George H. Weaver, Chicago; "The Present Status of Bacteriologic Investigations and their Relations to Etiology and Therapeutics" by Dr. N. S. Davis, and "General Microscopic Examination of Blood: Its Importance as a Diagnostic Measure" by Dr. D. D. Bishop, Chicago, who discussed blood counts, hemoglobin percentage, blood smears with differential leukocyte count, red blood cell variations and the presence of parasites.

A Public Health Lecture was delivered by Dr. J. J. Kinyoun, United States Military Hospital Service, Washington, D. C., on "The Management and Control of Infectious Diseases."

Chicago's first diphtheria antitoxin was issued on October 5, 1895, by the Chicago Health Department.

Two great scientific advances occurred in 1895: The Widal reaction in typhoid fever was introduced, and Roentgen discovered the x-ray.

#### 1896

At the annual meeting of the State Society, the presidential address was delivered by Dr. D. W. Graham, Chicago, on "Mutual Relation of the Medical Profession and the Public." Dr. James A. Whittaker, Cincinnati, gave an address on "Cryptogenic Sepsis" with reference to prevalence and difficulty in detection of the source. "Thyroid Therapy" was discussed by Dr. James B. Herrick, Chicago. An announcement was made of typhoid immunization.

#### 1897

The annual meeting was held in East St. Louis with Dr. D. W. Graham, Chicago, chairman. A special address was delivered by Dr. Weller Van Hook on "Relation of Surgery to Internal Medicine," which he stated was almost the history of medicine itself and of vital importance to all. According to Dr. Van Hook, the rise of specialists in internal medicine was a phenomenon quite new, at least in American medicine. He said that the specialist should have a distinct place in the estimation of his professional colleagues, as well as of the laity; that allowance should be made for the great difficulties with which the specialist had to contend, and that the general practitioner should respect his opinion in the particular field in which he had specialized.

Dr. Robert B. Preble, Chicago, spoke of the effects of arteriosclerosis on the heart, especially in those cases in which the coronary artery is diseased or in which the valves are affected, or in cases where both of these structures escape and the heart hypertrophies because of the burden of periph-

eral arteriosclerosis. Dr. Henry Favill, Chicago, commented on the treatment of arteriosclerosis.

Dr. Arthur Edwards, Chicago, reviewed the diagnosis of malaria and the determination of parasitic types. Dr. C. W. Hall, Kewanee, enumerated the sequelae of typhoid. "Serum Test in the Diagnosis of Typhoid—Widal Reaction" was described by Dr. George H. Weaver, Chicago. Dr. Otto Schmidt, Chicago, spoke on "Roentgen Ray in Medicine: The Fluoroscopic Method versus the Skiagraphic Method"; he gave numerous demonstrations of skiagraphs.

An address was delivered by Dr. John H. Hollister, Chicago, on "The Respiratory Tract as an Avenue for Infection." He stated that the most signal achievement in the progress of medicine during the closing years of the Nineteenth Century was demonstration of the fact that infectious diseases were of microbic origin. He said: "We can deal intelligently with specific causes." In dealing with pathogenic germs, it was his opinion that it was a prime necessity to determine under what conditions they developed, the manner of their diffusion, and the means available for their control and destruction. He stated further: "Some are water-borne, some are food-borne. . . . By far the larger number of pathogenic germs are conveyed through the air and enter the system by way of the upper respiratory tract."

The Committee on Medical Practice cited diphtheria as a purely local disease until the toxin is absorbed and constitutional symptoms develop. They stated that catarrhal symptoms ushered in German measles, scarlet fever, smallpox, whooping cough and influenza. The Committee emphasized the necessity of maintaining the mucous passages of the upper respiratory tract in their integrity, thus rendering them resistant as far as possible. The Committee offered the following suggestions for quarantine: (1) effectual isolation of affected persons; (2) disposal of pathogenic germs so that their diffusions by any means would be impossible; (3) health of respiratory passages should at all times be a matter of primary concern for *resistance* to infection; (4) surgical operations were contra-indicated when specific infections were likely to occur, as cut and abraded surfaces favored an invasion, and (5) determination of who may or may not be safely detailed for the patient's companionship and care.

There was general discussion pro and con of the vital statistics introduced by Dr. L. R. Ryan, Galesburg. Their importance was stressed in sociology, political economy and preventive medicine. There was a plea made for honesty and completeness, good sanitary laws, and registration of births, marriages and deaths.

The Society appointed delegates at this meeting to attend the International Medical Convention to be held in Moscow.

Another report was given on the State Vaccine Laboratory.



Present at this meeting was Dr. A. X. Illinski, who practiced in Cahokia when it and Kaskaskia were the principal settlements in Illinois. He gave most of the medical services for the region at that time.

1898

At the annual meeting of the State Society, Dr. James B. Herrick read a carefully prepared paper on the "Diagnosis of Pleural Effusion with Particular Reference to Misleading Physical Signs" which was discussed by Drs. B. W. Sippy, J. L. Miller and Arthur Edwards, all of Chicago.

Dr. Joseph L. Miller gave an account of the smegma bacillus, mentioning the importance of its differentiation from the tubercle bacillus and the further importance of knowledge of its distribution.

Dr. B. W. Sippy spoke on "Significance of Certain Symptoms and Signs in Heart Insufficiency." He discussed cardiac function versus disease of the heart valves, and the importance of recognizing insufficiency of function (distended veins, liver engorgement, edema, urinalysis). There was pertinent discussion by Drs. James B. Herrick and H. H. Coulter, Peoria.

Dr. S. A. Matthews, Physiologist of the University of Chicago, read a paper on "Therapeutic Use of Digitalis as Shown by its Pharmacologic Action on the Circulatory Organs of Mammals." This was a scholarly exposition of the discovery and use of digitalis in mammals as well as in man, and a description of the application of experimental use of digitalis to clinical treatment of man.

Dr. George F. Butler, Chicago, presented an interesting paper on "Untoward Action of Drugs: Idiosyncrasies; Unusual Effects in Disease." He listed almost 100 drugs and explained their action upon the general system, including the brain and cord, the eye, ear and throat, the skin, liver, kidneys and bladder.

Dr. George W. Cox, Chicago, discussed "Streptococcal Infections."

Many soldiers with typhoid fever during the Spanish-American War were brought to Chicago hospitals.

Dr. Walter Reed and others had demonstrated that typhoid fever could be transmitted by contact, flies, water, food and milk pollution, and unclean hands.

It was reported that the span of life had increased from 13.9 years in 1869 to 29.4 years in 1898.

1899

Medical education was again the topic of an address before the Society. Dr. Carter of Waukegan dealt with the multiplication of medical schools and the shocking scramble and bidding for students. He decried the poorly equipped schools, and felt that the increased number of medical schools was simply a method of advertising themselves and the teachers.

Dr. Carter said: "An honest competent physician never solicits patronage."

A discussion of "Stomatitis Materna" was presented by Dr. Jacob Schreck of Mt. Carmel. He pointed out that the disease was most common during the "nursing period." Dr. N. S. Davis, in comment, believed that it was a deficiency disease due to abstraction of phosphatic compound and chloride salts during pregnancy and lactation. The recommended treatment was syrup hypophosphites or lactophosphate of calcium, or chlorate of potassium.

The leading article in the August issue of the *Illinois Medical Journal*, on "Therapeutics: Past, Present and Future" by Dr. George Butler, was concerned chiefly with the use of antitoxins and sera. He also spoke of the use of strophanthus, ergot, digitalis, elaterin and cocaine, with a study of their action by pharmacologic methods, including animal experiments.

In the September issue of the same publication appeared an article on "Malaria—Chronic" by Dr. Charles D. Center of Quincy. He explained variations in the manifestations of the disease as arising from differences in the causative parasite, individual differences in personality, differences in locality and time, and deviation or failure in the use of the specific—quinine.

Also in this publication was an article entitled "Atypical Malaria in Children" by Dr. Rosa Englemann of Chicago.

It was during this year that Drs. Reed, Carroll, Lazear and Agramonte demonstrated the mosquito transmission of yellow fever.

As one reads and re-reads these medical annals,<sup>3</sup> it becomes convincingly apparent that some of the problems of our predecessors remain major problems of our times. For are we not still trying to maintain the highest standards of medical education? Are we not still concerned about "state medicine," or public health as we now call it? Do we not still aim for better understanding and greater cooperation between the profession and the laity? And have the problems of alcoholic and narcotic "inebriety" been solved?

The earlier medical practitioners were baffled and at times almost defeated in their fight to control contagious and infectious diseases. But

<sup>3</sup>During the period 1850 to 1900, little worth-while work was done by the medical profession in Illinois that was not recorded locally or presented before the State and local medical societies. The transactions of the State Society and the few medical journals then in existence have been valuable, therefore, in "keeping the records straight" in Illinois. Toward the close of this period, as other chapters in this Volume show, and with the rise of the specialties, new medical publications began to appear and it was not long before a marked expansion of exotic literature invaded the field. Furthermore, the contributions of the Illinois profession became more widely scattered in the American literature than ever before. Never again, therefore, are we apt to observe so many important papers by Illinois men preserved in our own State Society transactions in a form similar to these annals.—*Editor*

their ceaseless efforts and their willingness to accept well-founded scientific knowledge finally bore fruit so that the scourges of their times—typhoid fever, malaria, cholera, smallpox, diphtheria—no longer wipe out vast numbers in our communities.

Surely the period of 1850 to 1900 was one of great achievement in the practice of medicine, and the practitioner of today must feel humbled by the stature and accomplishments of many of his earlier colleagues.

#### ADDENDA

Following are some pertinent medical excerpts from the period 1850-1900:

Smallpox was the last of the quadrivium of diseases (cholera, typhoid, malaria and smallpox) to be eradicated.

\* \* \*

There was a tremendous tuberculous infestation in Illinois in the latter half of the nineteenth century, particularly pulmonary phthisis and scrofula. An interesting article appeared in the *Illinois Medical Journal* of May 1940, by Dr. Frederick Tice, Chicago, entitled "A Century of Tuberculosis in Illinois" in which he said: "For the seventies and eighties, the reports are rather startling. In 1875, Springfield showed a tuberculosis mortality of 275.6 per 100,000; 190.8 per 100,000 for 1876, and 239.2 per 100,000 for 1877. In 1881, Rock Island had a tuberculosis mortality of 325 per 100,000. In 1887, the rate for Rockford was 141.8 per 100,000. Quincy, in 1875, had a tuberculosis mortality rate of 330 per 100,000 and a mortality in 1876 of 469 per 100,000. Even with Slab Hollow and the general picture of communicable disease as background, these figures for Quincy seem extremely high. Over the seventies and eighties many of the downstate towns showed a higher tuberculosis mortality than Chicago.

"It seems strange that the extremely high rates over this period, 1860 to 1880, did not arouse a greater public interest and stimulate some attempt at preventive measures. On July 1, 1877, two state laws, one known as the State Board of Health Act, the other as Medical Practice Act, both implemented by the board of health, organized July 12 of the same year, became effective. But the tuberculosis program was still largely untouched.

"Dr. John H. Rauch, secretary of the State Board of Health, who served almost continuously from 1877 to 1891, never locked horns with the disease. With an insight that transcended state and national boundaries and saw the whole world as a health unit, Rauch spent all his wealth of organizing genius in the epidemic field. For him and for workers of similarly fine caliber throughout the country, 1882 and Koch's epochal discovery should have lit the torch and brought it to a flame."

\* \* \*



With the discovery of bacteria, there was a shift in medical attention from therapeutics to etiology, from cures to causes, which explained in part the rapid growth of homeopathy and other sects in the latter part of the nineteenth century. The patient was more interested in cures.

\* \* \*

Goiter seems to have been recognized in our region in the middle of the nineteenth century. At the turn of the century this area was described as a goiter belt.

\* \* \*

In the *Bulletin of the Society of Medical History of Chicago*, June 1946, Dr. Carl E. Black of Jacksonville, wrote on "Medical Practice in Illinois Before Hard Roads." Following are some interesting excerpts:

"I am just a plain country surgeon, who has spent all his life in a small city of central Illinois and who has been associated with all sorts of country doctors—not a few of them real pioneers. They have been most interesting objects of study for me for years.

"Often they surprise us by their acute observations. This is illustrated by the following case. One of these early doctors, who was short on book learning but long on observation, telephoned one morning that he was sending to me at the hospital a patient with 'double ruptured tubal pregnancy.' I asked him how he arrived at that diagnosis. He said that the 'left tube ruptured yesterday morning at 10 o'clock and the right tube this morning at 8 o'clock.' The patient came, and when I operated I found that the physician was exactly correct in his diagnosis. The patient made a good recovery. The early physicians were practical men, who knew how to adapt themselves to their surroundings and environment for the benefit of their fellow men.

"Please do not look on me as a historian. I am just one of the persons who likes to know what our colleagues of old did and how they did it; one who likes to gather together the little things, which the real historians later mold into the bigger things of history.

"My father (Dr. G. V. Black) was a pioneer doctor and dentist, and my preceptor was a great pioneer surgeon who taught anatomy and surgery in the first medical school in Illinois (Medical Department of Illinois College, 1843) at Jacksonville, Illinois. . . .

"Dr. David Prince was one of a group of these early doctors in central Illinois who saw the necessity of a local medical school, where the doctors of the future, so much needed by the early settlers, could be taught and trained. Even St. Louis then was a long way off by river boat or on horseback. And Chicago was, as yet, only a dot on the shore of a great lake. . . .

"This era in medicine in Central Illinois may be roughly divided into days of horseback and bridle paths, horse and buggy, automobile, dirt road and hard road.

"I have often said that there is no town or village within 50 miles of my home at Jacksonville to which I have not driven with horses. At times I went part way on a train and, obtaining a team at a local livery stable, continued to the end of my journey. There are many of our young doctors of today who know nothing about the livery stable, that indispensable aid to the early-day doctors.

"The early efforts at organizing medical societies were not very successful, one reason being the difficulties of transportation. Men could not meet frequently enough to really get acquainted. But now, with hard roads, all this is changed. . . .

"Finally, why take the advent of the hard road as a dividing line in medical practice in Illinois? There are several reasons. First, the hard road is the greatest single accessory ever given to the medical practice of central Illinois, even greater than the railroad. Second, there is not one of the places mentioned in this paper which cannot now be reached—summer or winter, rain or snow, day or night—in 30 or 60 minutes of comfortable driving by automobile. Both distance and time have been greatly shortened for the doctor. Third, the hard roads have lifted the country doctor and his consultants out of the mud and dust. Fourth, the cost of travel by auto has greatly reduced the doctor's expense. A team of good horses and the necessary feed, harness, care and vehicles were a far greater expense than the auto. Fifth, this great saving of the doctor's time permits him to use it in other more profitable ways. Sixth, the easy and rapid transfer of the patient from his home to a well equipped hospital saves much labor and time and gives the patient the benefit of better service at less expense.

"If it were not for the hard roads, we should still be doing many operations in the home. From my point of view, the hard road has been the greatest single contribution toward the improvement of the practice of medicine in Central Illinois. It has had much to do in lifting it from the crude pioneer level to the high level of modern medicine."

\* \* \*

Dr. Erwin H. Ackerknecht, of the University of Wisconsin, gave the D. J. Davis Lecture at the University of Illinois School of Medicine in 1952. Following are some pertinent excerpts from his discussion:

"The diseases the Midwest (then called the West or Northwest) suffered from were, with a few exceptions like milk sickness and goiter, the same as those of the East: malaria, typhoid fever, dysentery, erysipelas, cholera, smallpox, epidemic meningitis, tuberculosis, diphtheria, scarlet fever and influenza. It was their quantity and the specific setting that gave them their particular Midwestern aspects. . . .

"Several reasons make it impossible to give exact overall figures, due to the absence of reliable statistics; the faultiness of diagnoses; and the lingering of the Rush-Broussais ideas of the 'unity' of disease which made even some of the best observers deal with diseases as different as malaria, typhoid fever, milk sickness, meningitis and dysentery under the same heading.

"Malaria was the prevalent disease in the Middle West during almost the whole of the 19th Century. . . . The malariousness of the region was such that serious observers doubted the possibility of settling it permanently. . . . As a matter of fact, malaria had become so common that by many it was no longer regarded as a disease. . . . The older Dr. Mayo left Indiana for Minnesota as late as 1854 on account of malaria. . . . Malaria practically disappeared from the Middle West between 1890 and 1900.

"It was the impression of N. S. Davis and many other qualified observers that during the 1850's in Illinois, typhoid fever took more and more the place of malaria. . . . It will probably be forever impossible to state how much of the 'malaria' in the 19th Century was typhoid, and how much 'typhoid' was malaria,

especially after Woodward, to crown the confusion, introduced in 1862 his ugly hybrid 'typhomalaria'. . . . But it is certain that typhoid became the prevalent epidemic disease of the Midwest in the second half of the 19th Century, remained so well into the 20th Century and, unlike malaria, was overcome only by systematic antityphoid work. Illinois, for instance, suffered its biggest epidemic in 1890-92; then started the systematic fight for better water supplies, toilet facilities, and against fly transmission.

"Dysentery epidemics in Illinois in the 1850's, 1860's, 70's and 80's showed mortalities of 7 to 9 per cent. . . . The effectiveness of ipecac in some cases suggests the presence of amebic as well as bacillary dysentery.

"Erysipelas is another disease so far neglected in surveys of the early pathology of the Middle West. And yet numerous malignant epidemics of erysipelas or 'black tongue' from the 1830's into the 1870's are on record, all the more malignant as they were usually accompanied by epidemics of puerperal fever. . . . In the 1860's and 70's, epidemics of erysipelas, sometimes with high mortality, were still reported from Illinois and Minnesota.

"Cholera, in its worldwide wanderings during the 19th Century, struck the Midwest four times: in 1832-34, 1849-55, 1865-68 and 1871-73.

"There were smallpox epidemics, e.g., among Michigan Indians, in 1703, 1732, 1783, 1832, and Illinois Indians in 1837. Neither these nor the smallpox epidemics among early settlers are particularly surprising. But that smallpox should remain a major public health problem in our region well into the 20th Century, due to the unwillingness of many natives and immigrants to become vaccinated, is a rather amazing feature. . . . As late as 1903, Illinois had a smallpox epidemic with 1664 cases; and this after having had at least every ten years since the 1840's, a large epidemic, that of 1894 being still so extensive that 'pesthouses' all over the state had to be opened.

"Milk sickness or 'sick stomach,' produced by the milk of cattle poisoned with the white snake root . . . was predominantly a disease of the Middle West. During the first half of the 19th Century it proved so deadly and widespread that again it provoked prophecies in the 1830's that the country infested with milk sickness could never be permanently settled. . . . In 1838, an Ohio farmer, John Rowe, Fayette County, showed through animal experiments that *Eupatorium urticaefolium* was the cause. . . . It took science almost a hundred years to accept Rowe's point of view, shared by many farmers and doctors of the period.

"The first medical records on epidemic meningitis in our region date from the 1840's. Illinois experienced an epidemic in 1845. Many more were to follow in about 10-year intervals."

## BIBLIOGRAPHY

1. Ackerknecht, E. W.: Diseases of the Middle West, D. J. Davis Lecture, University of Illinois, 1952.
2. Black, C. E.: Medical practice in Illinois before hard roads, *Bull. Soc. Med. Hist.* 5:401, 1946.
3. Bonner, T. N.: N. S. Davis and the growth of Chicago, *Bull. Soc. Med. Hist.* 26:360, 1952.
4. Davis, D. J.: Pertinent comments on the practice of medicine a century ago, *Ill. Med. J.* 103:263, 1953.
5. Fitz, R.: The rise of the practice of internal medicine as a specialty, *New England J. Med.*, 242:569, 1950.



6. Herrick, J. B.: N. S. Davis, *Bull. Soc. Med. Hist.* 4:403, 1935.
7. Whalen, C. J.: Epitomized record of progress of medicine during the last 100 years, *Ill. Med. J.* Vol. 77, 1940.
8. *Transactions of Illinois State Medical Society*, 1850 to 1898.
9. *Illinois Medical Journal*, 1899.
10. *Northwestern Medical and Surgical Journal*, 1850 to 1898.

## CHAPTER VIII

# GENERAL SURGERY

BY KELLOGG SPEED, M.D.\*

I AM not vain enough to suppose that I have exhausted the subject; like a traveler who is exploring, for the first time, the resources of a new country, I have made many extensive excursions, wandered hither and thither in pursuit of objects, culling here and there a choice flower, or picking up a gem by the wayside; but many things have doubtless escaped my attention, and much is left to reward the research and scrutiny of my successors."<sup>1</sup>

### INTRODUCTION

The threads of the story of surgery in Illinois may be picked up as early as 1830. The doctors of medicine of those years often cared for the sick under trying conditions; housing was crude, the water supply often unsanitary, and hygiene unknown. These pioneer men of medicine were versatile; often they possessed legal knowledge and at intervals acted as judges, and it was common for some to have had training as ministers of the Gospel. Weaver cites a Yorkville physician who met a neighboring physician in Aurora and told him he had performed during the day a surgical operation and tried a law suit. The friend's reply was that in that day he had visited his patients, tried a law suit and preached a funeral service.

The history of surgery in Illinois in the period 1850 to 1900 is naturally interwoven with the history of the advance of medicine in the whole world. However, there are several factors which undoubtedly influenced the dramatic advance of medicine in this state, as follows:

1. Illinois, although centrally located in the North American continent, has been far from isolated; it lies favorably situated at the foot of the Great Lakes and has been since early days a natural stopping point for people moving east or west across the continent.

\* Following his graduation from the University of Chicago and Rush Medical College, Dr. Speed was successful in obtaining an internship at Cook County Hospital by competitive examination. Later, through the periodic examinations for attending men, he gained the rank of Attending Surgeon, which position he held for some twenty years. He also early acquired a position on the surgical staff of Presbyterian Hospital in Chicago, where he conducted his private and consulting practice, and held a Professorship in Surgery in Rush Medical College. Dr. Speed has contributed many scientific papers to the medical literature and is the author of the well known Textbook on Fractures and Dislocations, which has now passed through several editions.—*Editor*

<sup>1</sup> From the writings of Samuel D. Gross as quoted by Weaver (see Bibliography).

2. From the very beginning of its medical progress, Illinois has been fortunate in possessing native sons of high intellectual and surgical attainment, or in attracting men of similar stature to follow their professional careers within its borders. In reviewing the lives and works of the early surgeons, one is impressed by their extraordinary vigor; their singleness of purpose; the excellence of their education for those times; their familiarity with the surgical literature of the United States, England and Europe, and their remarkable vision in all things medical.

3. The Illinois State Medical Society, founded in 1840 and reorganized in 1850, early brought together the active progressive medical and surgical men of the state. The records of those meetings, including the formal papers presented and discussed, and the problems of this rapidly growing profession, have been preserved in the Transactions of the Society, obtainable for review by the research scholar who will find them of inestimable value.

4. The history of surgical advance in Illinois was closely related to the history of the medical colleges in the state, one of which (Rush Medical College) was founded as early as 1837. The schools enjoyed varying periods of popularity and success. Those best fitted to carry on medical and surgical teaching survived, largely because they were able to obtain anatomic and clinical material for instruction purposes. As the early germs of surgical education sprouted and spread, highly trained surgeons and teachers were attracted to these institutions. Later, through the vision of the pioneer men of medicine, the medical schools were affiliated with or absorbed by large universities. This raised the standards of education, led to the lengthening of the required time spent in medical school, and re-emphasized the need for better and more prolonged study of anatomy before surgery was permitted. There ensued logically an elevation of the scholastic qualifications of men seeking admission to medical colleges.

5. Hospitals, with beds for patients to be used in the clinical teaching of operative surgery and follow-up care, developed similarly but more slowly than surgery itself. Subsequently nursing schools were established to train young women in the work of surgical assistance. With these steps forward, surgery was in a position to accept the theories of Lister; it could apply antiseptic methods followed shortly by aseptic technics. By this transition from antiseptic to aseptic surgical methods, hospital mortality rates soon were lowered and hospital confinements shortened, and the people of the state gradually accepted the advantages of alleviative or curative surgery as opposed to hasty emergency surgical interventions.

6. No doubt the experiences and training that surgeons received during the Civil War period stimulated them to greater effort to save lives and reduce human suffering. The surgeons of Illinois took a prominent part



in war surgery; many served throughout the entire four years, returning home to practice and to instruct. Later their work was supplemented by experiments on laboratory animals by such surgeons as Senn, Fenger and others, many of whom attained international recognition.

7. In the latter part of the period under discussion, there followed the formation of influential national and local surgical societies, as well as the development of the specialties with separate identities within the field of surgery.

8. Finally, late in the history of surgery in these fifty years came the discovery in 1895 of the x-ray with its manifold advantages for surgery, soon to be still further enhanced by the discovery and application of radium.

#### SURGERY IN THE MEDICAL SCHOOLS<sup>2</sup>

There were five pioneer medical schools near Chicago: The Medical Department of LaPorte University (later Indiana Medical College) at LaPorte, Indiana, organized in 1842 and discontinued in 1850; Franklin Medical College, St. Charles, Illinois, organized in 1842 and discontinued in 1849; Illinois College, Jacksonville, Illinois, organized in 1843 and discontinued in 1848; Rock Island Medical School, Rock Island, Illinois, organized in 1848 and after one year removed to Davenport and later Keokuk, Iowa, and Rush Medical College, Chicago, organized in 1843. The last mentioned school was the only one which went on without interruption and it was the only medical school in Chicago until 1859 when the Medical Department of Lind University was established.

In 1851, Dr. N. S. Davis wrote: "Of the 36 or 37 medical colleges in active operation only 16 were so located as to afford those in attendance any opportunity for witnessing hospital or bedside instructions." Dr. Nichols Hard said: "The dextrous use of the pen knife precedes that of the scalpel, and the statement of a problem in the Rule of Three, the statement of a case in consultation."

In Volume I of this series, the history of these colleges is set forth in some detail. However, in order to appreciate clearly the significance and often the dominant rôle of surgery in the curricula of medical colleges of the period 1850 to 1900, the history of Rush Medical College will be recited here, even though there may be some repetition in so doing.

*Rush Medical College.* In Chapter X, Volume I of this series, begins the

<sup>2</sup> For an excellent account of early medical schools and medical education in Illinois, the reader is referred to "Beginnings of Medical Education in and near Chicago: The Institutions and the Men" by George H. Weaver, published in the *Bulletin of History of Medicine of Chicago*, 1925, Vol. 3, p. 339.—Editor

account of the early history of the first medical school in Illinois, namely Rush Medical College. There is a brief summary with special reference to surgery. The first idea of the establishment of this college in Chicago dates back to 1836. In the autumn of that year, Dr. Daniel Brainard and Dr. Josiah C. Goodhue drew the act of incorporation which, at the ensuing session of the Illinois Legislature at Vandalia, was passed, and was approved by the Governor on March 2, 1837. At that time a financial depression fell with a blighting force upon public and private enterprise. In the year 1839, while waiting to launch the school in Chicago, Dr. Brainard visited Paris where he remained for about two years, engaged in perfecting himself in the details of professional service. Upon his return, he soon completed his plans for the establishment and permanent foundation of Rush Medical College. No action, however, took place under the charter before the summer of 1843. Early in the autumn of that year the faculty of the College was organized by the appointment of four professors: Drs. Daniel Brainard, J. V. Z. Blaney, John McLean and Moses L. Knapp. Dr. Brainard became the first Professor of Surgery.

During the summer of 1844, a college building was erected upon the southwest corner of Dearborn Avenue and Indiana Street (Grand Avenue) a lot donated for the purpose by several public spirited citizens of the North Side. Its cost, which did not exceed \$3,500 (one figure given is \$2,300) was defrayed by loan, subscription and contributions from the faculty. Drs. Blaney and Brainard each contributed \$200.

In 1855, this building was entirely remodeled and enlarged at a cost of \$15,000 to accommodate about 250 students. This expense was wholly sustained by the faculty, and at this time Dr. Brainard was listed as Professor of Surgery. He continued in this capacity until soon after the opening of the session of 1866, when he died of Asiatic cholera.

In the year 1859, certain members of the faculty resigned and organized another school, the Chicago Medical College.

In 1867, Dr. Moses Gunn was called to the vacant chair of surgery and clinical surgery from a similar position at the University of Michigan, and Dr. Edwin Powell was appointed Professor of Military Surgery and Surgical Anatomy. Later the chair of clinical medicine and diseases of the chest was held by Dr. J. P. Ross, and the chair of diseases of the eye and ear by Dr. Edward L. Holmes. Later (1888 to 1895) Dr. Albert J. Ochsner was an Instructor of Surgery, and still later he became Professor of Surgery of the University of Illinois.

In 1867, an entirely new edifice was erected upon the vacant portion of the lot upon which Rush Medical College was situated, and the old structure was remodeled so as to be merely an appendage to the new building. The new structure was especially designed for surgical teaching. It had

two lecture rooms, each with a seating capacity of over 700, a spacious laboratory and adjacent anatomical rooms. This constituted one of the largest and best arranged medical colleges in the country. The cost of the whole improvement, exclusive of the original building and lot, was about \$70,000; this was met solely by members of the faculty. The entire structure, including apparatus, museum, library, cabinets, furniture and fixtures, was destroyed by fire on the night of October 9, 1871. All that was ever rescued from the ruins was the corner stone and the half melted stand of Dr. Freer's microscope located in the debris of an exhibit the college had shown of "blood, of globules, spermatic animalculae and elementary tissues."

Three days after the fire, a number of students returned and lectures were commenced in the amphitheater of the old County Hospital and at the close of the session, 77 students were graduated. Succeeding sessions were held in a temporary structure erected for the purpose. The last course given in that building was attended by 230 students and 79 were graduated.

#### SURGERY IN MEDICAL PUBLICATIONS

##### *Transactions of Illinois State Medical Society*

The annual meetings of the Illinois State Medical Society furnish abundant information concerning the contributions of the surgeons. Their papers and discussions serve as a reliable index of the progress of surgery in the state.

1851

Dr. W. B. Herrick, a well-known surgeon, was the only representative from the Chicago area at this meeting. Stark and Winnebago Counties had the largest representations. A Committee on Surgery was appointed consisting of Drs. J. Murphy of Peoria, William B. Herrick of Chicago and A. L. McArthur of Peoria. This represented the first organized effort in the development of surgery in Illinois.

A resolution against quackery in surgery and medicine was introduced. The Society took action to elect a special committee of three to prepare for the following year a bill to regulate the practice of medicine and surgery in the state. It was planned to present this to the General Assembly at its next meeting. Another committee of three was appointed to "investigate the subject of legal dissections, in all its relations and bearings, inasmuch as the then present laws and public sentiment of the people of the State of Illinois are strict and binding, holding the physician and surgeon legally responsible for the performance of their duty but at the same time are hostile to those means by which a practical knowledge of the skill and surgical anatomy is obtained." This was an attempt to secure anatomical material for dissection and demonstration.



As a practical economic measure a resolution was introduced by Dr. J. C. Frye of Peoria that "a committee of three be appointed to memorialize the Legislature in regard to the unjust and oppressive operation of the late law of homestead exemption upon the medical profession; seeing that the mechanic is secured in his remuneration for labor necessarily completed before payment, and while the merchant possesses the choice of saying whom he will trust, the physician has to attend to all, perhaps more because they are poor, and under the present law is dependent wholly upon the honor of a large number who are indebted to him and never intend to pay." Such an understanding of humanity was held by our sturdy forefathers!

Dr. Herrick, in his 1851 Presidential Address, hailed the approach of a new era in the study and practice of medicine. In his discussion of the oxidation of food and materials in the body, he spoke of the "fibrine" in the blood and mentioned the "fact stated by Hassal, in his 'Microscopic Anatomy of the Human Body,' where it is asserted that 'the true cause of the fatality which has so often attended the operation of transfusion (blood) depends upon the differences which exist in the qualities of the fibrine in the blood of two different animals, or even two distinct individuals. This is shown by the fact that the transfusion of blood deprived of its fibrine, is never followed by the serious results to which reference has been made.'"

Appendix B was entitled "Chloroform in Surgical Operations, an Additamentum to the Report on Surgery." Dr. E. S. Cooper of Peoria reported on an opportunity of testing the effects of chloroform as an anesthetic agent in 79 surgical operations since the reorganization of the Illinois State Medical Society, mostly minor operations, which he thought displayed the merits of the article itself in producing insensibility. *This is the first record of the use of chloroform in the state.* Its effects were as various as those of the protoxide of nitrogen. It was advised to administer it a few drops at a time when the patient's stomach was empty. It was considered safe to begin with a small amount on a napkin or sponge held at a distance from the mouth "as there is a great susceptibility of some grown persons to its action." He reported one case of a 25-year old woman who was operated upon for strabismus on December 10, 1850, seated in a chair. Chloroform was given under his direction, 20 drops used with a napkin held close to the mouth. "Two or three vigorous inhalations were rapidly made, when the patient sank down and would have fallen. She struggled, gasped for breath, became pulseless, and lips and cheeks assumed a purple hue. She was placed in a recumbent position, lungs forcibly expanded, fauces titillated, face sponged with spirits of camphor and some being given internally. She recovered slowly with headache, pain and fullness in the chest, and with prostration and loss of strength for days. Two weeks later the doc-

tor tried chloroform again with the napkin held three inches away and 15 drops used. The chloroform was increased and a complete and pleasant anesthesia produced with no unpleasant after symptoms." Certainly our forebears had courage and used trial and error to its limit.

After that experience the doctor did not use chloroform to the extent of producing anesthesia in any case without testing the susceptibility of the patient by first using the smallest imaginable quantity. He said that most if not all fatal cases (he did not report any of his own) occurred in consequence of rapid inhalations rather than too long a continuance of chloroform. There comes to mind Senn's "talking anesthesia" soon after the turn of the century, using ether in resection of the frequently found tumors of the face, palate or jaws in which there was much uncontrollable bleeding into the mouth and throat. Suction apparatus was unknown, but by keeping the patient partly under the influence of the anesthesia, Senn still preserved his patient's cough reflex, with the result that blood and saliva were frequently spewed over the surgeon and his assistants. But inhalation pneumonia was avoided.

## 1857

In 1857, the Seventh Annual Meeting—an outstanding one—was held at Rush Medical College in Chicago. Dr. H. Noble was President. There were present eight permanent members from Chicago and 24 delegates from down state. Drs. John H. Hollister, Edmund Andrews, Daniel Brainard, D. W. Graham and E. L. Holmes of Chicago were elected to permanent membership. The Committee on Surgery consisted of Drs. William M. Chambers of Charleston, F. B. Haller of Vandalia, and J. H. Hollister of Chicago.

At this meeting Dr. Brainard read his famous paper on "Treatment of Ununited Fractures by the Method of Perforation." This consisted of drilling crosswise in several directions through the site of non-union, followed by immobilization. The drilling was done with ordinary nonsterile drills and often led to local infection. However, it succeeded many times in obtaining union; it was an entirely new method and was so recognized throughout the surgical world.

An instance of tracheotomy was recorded in which the doctor had in his hurry employed a female silver catheter from his pocket case, cutting off the point with a pocket knife. Using this, he was able to inflate the child's lungs with the help of artificial respiration continued 35 minutes, the heart beat being perceptible after 12 minutes. Five days later this cannula became obstructed and on removal was found to contain a false membrane. The child was allowed to die at her father's request!

Dr. Calvin Truesdale of Rock Island reported an instance of "Severe

Mechanical Lesion of the Knee Joint" by a circular saw through muscle, patella and condyle of the femur. Under chloroform part of the patella was removed (the first patellectomy recorded in the state). Blood was washed out of the joint which was closed with interrupted stitches, and cold water dressings and splint applied, in spite of which suppuration followed. The joint was drained several days later, the patient this time being under the influence of brandy. The patient recovered; nine months after the accident he could walk without crutches.

## 1858

The Committee on Surgery consisted of Drs. Edwin Powell of Chicago, A. D. Stephens of Vandalia and A. H. Heise of Joliet. Dr. J. W. Freer of Chicago sought the appointment of a committee on "The Treatment of Anchylosis by Forcible Rupture" and presented a new dressing for treatment of fracture of the clavicle, using adhesive tape.

## 1859

The Committee on Surgery appointed this year consisted of Drs. Brainard of Chicago and Dr. V. D. Howell of Aurora. Dr. C. B. Johnson of Chicago was President and his address was on "Human Dissection." He stressed the absolute necessity of anatomical studies as a part of medical education.

## 1860

Dr. David Prince of Jacksonville was President of the State Society. His address covered the legal relations and responsibilities of the physician and the surgeon on account of numerous law suits brought against them. He cited two cases. One occurred after a crushing open fracture when amputation was performed. Later the leg was disinterred and became the basis for a suit for damages (malpractice). In the other instance the surgeon tried to save a leg under similar conditions but the limb, when healed, was shown to be  $\frac{1}{2}$  inch shorter than its fellow. He was sued by the patient for the sum of \$5000 for *not* amputating. This suit was finally dropped by the plaintiff, but the surgeon became so disgusted with human gratitude and the conditions of practice of the time that he abandoned his profession.

Practically all open fractures at that period went on to infection and a very high percentage later to amputation, as there was no antisepsis and no primary control of the wound. This course of events was considered inevitable.

The Report on Surgery for the year was given by Dr. Brainard on the treatment of ununited fracture, a quite common ailment of the time. This report was epoch-making and is worthy of consideration in detail:



Dr. Brainard advised a subcutaneous operation by means of a gimlet or needle, hoping thus to avoid devastating suppuration. He spoke of the earlier use of ivory pegs that had been employed in these cases as interfering with callus formation between the bone fragment ends. He started by using a small instrument through a minute skin puncture, then making three punctures across the non-union in the bone through such a hole. Ten days later, using a longer drill or gimlet, he made more traversing holes and continued thus until some tenderness and heat appeared in the part. He often required as many as eight such local operations to succeed in finally establishing bony union. He obtained union in 16 out of 17 patients of ununited or delayed union of long bones. He also recorded two cases of ununited femora in which the bone ends were fixed together in open operation by a metallic substance. Both of these resulted in bony union but only after much suppuration. He did not recommend the procedure for ordinary use. He reviewed the known methods employed up to that date for this condition, citing Malgaigne's method of rubbing the fractured bone ends together, the use of acupuncture needles, setons, ligature, resection, abrasion of fragments and cauterization. He cited Hamilton's "Textbook on Fractures" which advised "the practice recommended by Brainard, namely, perforation of the soft parts and bone with an awl" and "if in the lower extremity, allow the patient to walk about after the plan of White or Smith." We can understand, therefore, that Dr. Brainard of Illinois not only had a national reputation, but also an influence in solving at least one of the most difficult problems of surgery of his day.

Dr. Brainard also reported at this time the wiring of bone ends together with three successful cases, and treatment of malunion after fracture with deformity by weakening the bone on one side by perforation to soften it in order to permit easy breaking by forcing it back into position with splint pressure. Finally, he described an operation for ankylosis of the knee joint which might be considered the first arthroplasty of this joint performed in Illinois.

Brainard prophesied that when instruments were found capable of effecting a neat and perfect division of the bone with so little injury to the soft parts as not to give rise to suppuration, his method would become obsolete. He had contrived several different kinds of saws to effect this but none had succeeded. He related a method of manual reduction of dislocated hips without the help of pulleys or other mechanical power then employed. He also described an operation for ankylosed mandible, removal of jaw sequestra (mostly from mercury poisoning), and removal of parotid and submaxillary glands for a scirrhus carcinoma of the parotid which he had operated upon in 1857; to accomplish this, he divided the external carotid artery and facial nerve. Finally in his report he gave the technic of an opera-

tion to improve tracheotomy, for the compression and cure of aneurysm, for resection of the knee joint (4 cases, 1 death), for the cure of chronic hydrocephalus by injection of iodine, an operation for absence of the vagina, for the treatment of spina bifida by injection of iodine, for the treatment of urethral stricture by dilatation and external incision, and for trephining the skull for epilepsy caused by an ancient fracture of the skull.

Brainard's paper was followed by one by Dr. J. S. Whitmire of Metamora on the treatment of snake bite, empyema and other abscesses by iodine. Dr. David Prince read a paper on the use of metallic sutures and ligatures experimentally on dogs (he was one of the earliest vivisectionists in Illinois), employing silver wire to tie the carotid artery and the abdominal aorta. He had also used the wire as ligatures in removing a scirrhus carcinoma of the breast. He said the metal did not absorb fluid and excited no inflammation or suppuration and, if the external wound healed per primam, the result was good. This idea was not new as it had been reported in 1853 by Simpson and also by Sims. Dr. Edwin Powell presented a report on a series of fractures successfully treated by extension (traction) with adhesive tape. This was new, as most fractures were then treated in fracture boxes made of wood or by plaster of paris casts.

1863

Dr. Edmund Andrews of Chicago was appointed chairman of the Committee on Surgery. Dr. Prince read a paper on "Delayed Union of Fractures of the Bones" and made remarks on amputations, comparing advantages of circular and flap operations in military surgery. In the discussion of this paper, Dr. Andrews said that resections of the shoulder and elbow had a lower mortality than amputations at these levels. Resections of the femur were uniformly fatal, and in those of the knee joint the results were doubtful.

At this meeting Dr. H. G. Davis of New York read a paper on the treatment of tuberculosis of hip and knee by means of a traction splint. Dr. Andrews in discussion stated that he had used and improved this type of splint treatment. Characteristically, Dr. Andrews was constantly devising novel operations and splint arrangements. His son, Dr. E. Wyllys Andrews, once told the writer that his father in later years was much interested in gastric surgery and up to the time of his death was continually devising new resections and hook-up operations for the stomach and bowel, especially for carcinoma.

Spinal curvature and apparatus for its attempted cure were discussed.

Thus is recorded the interest and diligence of Illinois surgeons in keeping abreast with surgical advances.

1864

The 14th Annual Meeting of the State Medical Society was held in Chicago, May 3 to 5, 1864, in the Common Council room. War surgery was again the principal topic. Dr. A. H. Luce, Vice-President of the Society, presided and 33 members were in attendance, among them Drs. Thomas Bevan and J. P. Ross, the founder of Presbyterian Hospital of Chicago.

At the meeting Dr. Prince gave a 65-page report on the state of orthopedic surgery, covering talipes and some experiments on dogs for the study of regeneration of the tendo achillis after its removal. He also considered the use of electricity on paralyzed muscles as the best local gymnastic agent.

The report of the Committee on Surgery, given again by Dr. Edmund Andrews who was then Professor of Surgery in the Chicago Medical College, was on military surgery. A report on the activities of the Mound City Military Hospital was prepared by H. Wardner, Surgeon, U.S. Volunteers; he gave a long tabulated list of gunshot wounds, mostly fractures.

There then followed a discussion on fractures, mentioning the appliances perfected by Dr. Prince, Dr. Latta of Goshen, Indiana, and Dr. Dodge of Janesville, Wisconsin. The most important ones mentioned were devised to secure painless counter-extension of fractures of the lower extremity by a single inclined plane with adhesive tape and elevated foot of the bed. This was before the introduction and perfection of the Hodgen splint at St. Louis. It was also suggested that 30 grains of sulphur be taken daily by the patient to induce the formation of granulations.

A short talk was also given on exsections of portions of nerves for severe neuralgias, especially of the inferior dental nerve.

Dr. Prince of Jacksonville gave another report on orthopedic surgery, discussing deformities but omitting talipes, and reported his experiments on muscle action and contraction. He included "morbus coxarius" in telling of inflammation of joints of the extremities and the resulting deformities.

1866

The Committee on Surgery was headed by Dr. H. W. Davis of Peoria; the Committee on Plastic Surgery by Dr. Prince, and the Committee on Curvature of the Spine and Hip Diseases by Dr. J. W. Freer of Chicago.

Dr. C. R. Parks of Bloomington read a case report of a death from inhalation of chloroform.

Dr. George T. Allen of Springfield was appointed as a Special Committee on the Radical Cure of Reducible Hernia.

Dr. Edmund Andrews gave a paper on "A New Plastic Operation for Certain Deformities of the Face," in which he said there were serious objections "in transplanting flaps of integument which have been com-



pletely dissected out of their beds and only retain vascular connections at one extremity." There was stated to be great risk of failure to adhere in a new location, and concern lest the flaps might mortify from slight causes and later change on account of cicatrix and shrinking. He illustrated some patients with plastic repair of the nares and lower eyelids and lips, and talked of the method of flap shifting and suture, advising that no open spots be left after operation in which scar tissue could form.<sup>3</sup> How wise and bold these surgeons were before the days of aseptic surgery, when every operation engendered immediate suppuration!

1867

The Committee on Arrangements recommended that the Society hear a paper on "Tracings of the Pulse and Sphygmograph for Making the Same" by Dr. H. A. Johnson, Professor at the Chicago Medical School. "Deformity of the Spine Treated by Mechanical Appliances" by Dr. F. O. Earle of Chicago was also selected for a hearing.

Resolutions on the death of Dr. Daniel Brainard were introduced and passed.

A Committee on Fracture of the Lower End of the Radius was appointed with Dr. David Prince of Jacksonville as chairman. Dr. J. H. Hollister of Chicago was named chairman of the Committee on Language of the Pulse. The chairman of the Committee on Surgery was Dr. E. Powell of Chicago.

Dr. Prince offered a resolution, which was adopted, that the Committee on Legislation be instructed to consider the propriety of urging upon the Legislature the passage of a law requiring railroad companies and other incorporated companies using machinery, to be responsible for the expense of board, nursing care, medical supplies and medical attendance necessary for their employees during the process of recovery, not exceeding six months in cases of injuries received in the performance of their duties. This was the first attempt of the Employees Liability Act in the State of Illinois, *the initiative arising from the surgeons of the state.*

A resolution was also passed that "the thanks of the Society be tendered to the Superintendents of the Illinois Central Railroad Company, the Chicago and Alton and St. Louis Railroad, and the Toledo, Wabash and Great Western Railway for their favors of commutation tickets to members of the Society attending this meeting." This was probably one of the first acknowledgements of the one and one-third round trip tickets, now no longer available.

The report of the Committee on Surgery was given by the chairman, Dr. H. W. Davis of Paris. The first 60 pages covered his personal experiences and observations as an army surgeon. He told that in the third year of the

<sup>3</sup> This was one of the earliest papers on plastic surgery in Illinois.—Editor

war he was in charge of a General Hospital at Jackson, Tennessee, where he saw or performed many operations. He mentioned the favorable condition of the majority of the patients: "Each operation was conducted on strictly conservative principles and by conservative I mean that method resulting in the least loss and greatest gain to the patient. The rules that formerly led to and justified the removal of a limb were ignored, and the law of strict economy followed. . . . Early in the war, operations at the joint were ignored and very rarely was disarticulation attempted . . . as the injury together with the shock (this is the first mention of shock) both local and general, compelled the use of the knife at a safe distance above the wound . . . . I will again state that I am convinced of the utter impossibility of removing a shaft of bone, or any part thereof, in recent cases and leaving the periosteum, and of the certainty that the parts removed will be replaced by new bone, independent of the aid from the investing membrane . . . . In old cases, when the bone head became necrosed . . . the death of the periosteum preceded that of the bone and while layer after layer of osseous matter was deposited over and around the diseased part, each decaying in turn, the work was accomplished without the aid of periosteum." He reported a case of resection of the head of the humerus in an infected wound. Chloroform was used. He described the knives he made for the operation. This was evidently the first attempt to supply the modern periosteotomes. He cleared out the head of the humerus and 3 inches of shaft, leaving the periosteum and capsule of the joint, and *closed* the wound! This may well have been the first conservative subperiosteal resection of bone at a joint in the presence of chronic osteomyelitis, and it yielded a good result. Dr. Davis warned about the necessity of maintaining a leg in extension under similar circumstances (he meant traction) to retain the length during healing. He also spoke of the chance of lengthening a limb, if it had shortened in an earlier stage, by waiting for the irritability to cease.

Dr. David Prince reported on plastic surgery, namely, autoplasty and anaplasty, which was defined as "that department of operative surgery, which has for its end, reparation or restoration of some lost, defective, ununited or deformed part of the body." He considered it a modern art grown out of a recently acquired view of physiology and therapeutics. He cited the need of a good generous preliminary diet, including a high proportion of nitrogenous food and the beneficial effect of chloroform to lessen the pain and shock of operation. He mentioned one patient operated upon without chloroform who died on the table of shock. This was the first hospital patient at Jacksonville, Illinois, who was to be given chloroform, but the man who was to administer it was late; the operation went on without anesthesia and the patient died. Prince referred to the continued use of

alcohol and opium in operations and denied that chloroform had "an effect to diminish the plasticity of exudations." He also spoke of the local use of cold for anesthesia, perhaps the first use of refrigeration in Illinois. This he declared must be so used as not to freeze the flesh. He cited Dr. W. S. Edgar, Surgeon to the 32nd Regiment, Illinois Infantry, who stated that "at Vicksburg, it came to be the practice to place ice between the surfaces after amputations for a short time before the final closure, with the result of much more frequent union by first intention." Since then he (Prince) had enjoyed the use of a spray of ether on the parts with great satisfaction. "It is plain that nothing should be applied upon a wound surface which coagulates the albuminous fluids. The application of salts of zinc does this, and the treatment is, therefore, of questionable propriety. If the coagula are not well washed away (probably by draining fluids from the wound) they must serve as foreign substances adverse to union." He referred to Chassaignac introducing rubber drainage tubes to avoid this situation and continues: "If however, the wound can be so managed that nothing may be left in it that is certain to putrify, a small amount of effusion may be absorbed, as in subcutaneous wounds" (spreading ecchymosis). He quoted Simpson's experiments to determine the comparative tolerance of the tissues for metallic and organic suture threads and ligatures. He used needles to press on wounded blood vessels by insertion into, through or across soft parts.

Also at this meeting the Prentiss method of applying dry cold through a rubber tube coil fed with ice water was discussed. An *antiseptic* poultice was mentioned but it was said to furnish too much moisture for purposes of first intention union.

A solution of potassium permanganate, 1 dram to each pint, was mentioned as an excellent antiseptic, especially for irrigation, the main objection being its stain. Zinc chloride, glycerine and water were announced as antiseptics and as coagulators of the albuminous exudate which was desirable for union by adhesions.

A long classification was given of plastic operations with explanations and illustrative operations done by both foreign and American surgeons. One rule stood out: "A cicatrix should never be touched with a knife." This method was advocated: "Step by step, sound skin may be made to travel in the direction of a cicatrix until it occupies the position of the cicatrix removed." The surgeons of that day also knew that a flap should be broad enough to allow for shrinkage and it should not be stretched under tension. Illustrative instances of severe cicatrix of the face, mouth and neck were reported. Harelip and exstrophy of the bladder were discussed, and a fair sized bibliography of current articles and books on the subject was appended to this long and important paper.



1868

Dr. Edwin Powell of Chicago presented an abstract of a report on the treatment of ununited fractures by repeated drillings (Brainard method), strictures of the urethra by perineal section, cystotomy for cystitis, prolapsus recti, resection of nerves for neuralgia, and the use of bromine in erysipelas and carbolic acid in surgery. In the discussion, Dr. Prince reiterated the use of his spiked pressure apparatus for fractures.

At this meeting Dr. Moses Gunn was appointed as a Committee on Staphylorrhaphy. Also a report was given by Dr. R. G. Bogue, Surgeon at Cook County Hospital, on "Chronic Inflammation of the Hip Joint." He applied traction on the leg and described a wet dressing for the hip itself. He understood bone caries and pus formation, as well as the resulting ankylosis, and advised early operative removal of diseased bone with washing out of the remaining cavity by carbolic acid or potassium permanganate solution.

Dr. F. O. Earle of Chicago described the use of the Taylor brace for spinal curvature, including head attachments for correction in the cervical region.

Dr. Edmund Andrews described an "Improved Form of the Endoscope" which could be adapted to inspect all deep cavities and mucous passages into which a straight tube could be passed.

1869

Dr. Moses Gunn gave a report on staphylorrhaphy. The Committee on Surgery for that year gave no special report.

1870

The Report on Surgery was given by Dr. Moses Gunn. Excision of the hip joint was discussed as a means of obtaining relief from exhausting suppuration. Several reasons were advanced for doing this. A free drainage from the wound could be maintained until healing from the bottom occurred, for healing without suppuration was unattainable (but by inference desirable) even by the use of carbolic acid.

Nephrectomy and renal lithotomy were discussed. It was said that Hippocrates advised this. However, only one successful case had ever occurred, namely, that performed on the British Consul at Venice by an Italian surgeon. Two other cases were mentioned, one in Heidelberg and one at Guy's Hospital in London. Certainly Dr. Gunn kept abreast of surgical literature. Dr. Thomas Smith reported a case in which he used the already current oblique incision from the 11th rib to the ilium to approach the kidney. His operation was performed for supposed stones in the kidney but none

was found, and the patient refused to permit nephrectomy. (The anesthetic, if any, was not stated.) The patient, however, obtained complete relief of symptoms after operation!

Colles' fracture was discussed. An autopsy had been performed on a woman who had died following a fall from a window. Excellent anatomical descriptions of the wrist were made, and the author supplemented this by some experiments on the arm of a cadaver. He concluded: "The autopsy and subsequent experiment render it evident that we have, in the injury usually known as Colles' fracture, not a mere break of the bone, but a luxation to deal with." For treatment he suggested that the patient may or may not be etherized. A method of reduction similar to that now in vogue was minutely described. Dr. Gunn then described his method of reducing dislocations, citing a case involving the distal phalanx of the thumb. His method was "to place the dislocated member as nearly as possible in the identical position which characterized it at the moment of escape from the joint." The joint should then reduce easily, quickly and quietly. Dr. Gunn continued: "A well developed laboring man, with a dislocation of the terminal phalanx of the right thumb backwards and outwards, which had occurred five hours previously, was seen by several medical men who had unsuccessfully essayed a reduction. Amongst these I recognized at least one expert surgeon. I also made the attempt, after the usual manner of reducing phalangeal dislocation, and though extreme effort was made, I, too, was unsuccessful in first attempt. A little reflection recalled the fact that the tendon of the long flexor is inserted into the anterior surface of the *very base* of the phalanx and that from its position in the dislocation, it (the tendon) must be hooked around the side of the head of the first phalanx; while from the proximity of that portion of the tendon which was in constant contact with the side of the head to the front of insertion in the luxated bone, all ordinary efforts at reduction only more forcibly hooked the tendon in its abnormal position. I determined to act upon this view of the case, and, so confident did I feel in the correctness of my position, I determined to take him before the medical class for the trial. Seizing the first phalanx with my left hand, with my right I carried the luxated bone still further outwards, then forwards and lastly inwards, all by one semicircular motion, by which means reduction was almost immediately accomplished." Dr. Arthur D. Bevan, later Professor of Surgery at Rush Medical College, who had been one of Gunn's assistants, taught this method all through his teaching career. It was a great contribution to dislocations by this Illinois surgeon.

1871

Dr. Andrews was chairman of the Committee on Surgery. Dr. Prince reported again on plastic and orthopedic surgery. A new method of operat-

ing upon phimosis, copied from Erickson, was described. Transplantation of cuticle for healing of chronic ulcer was reported by Dr. Prince who stated that "these transplantations failed in the presence of suppuration."

Inhalation anesthesia was discussed. Chloroform was said then to be  $8\frac{1}{2}$  times more dangerous than sulphuric ether. Dr. Fitch admitted his preference for ether. This year probably represented the first more or less general change to ether from chloroform.

Dr. Andrews recommended a row of gas jets 10 inches long to illuminate an endoscope for use in the urethra and other parts. (This may well have been the first conception of modern cystoscopy.)

A report on a fracture bed was made by Dr. C. Truesdale of Rock Island. This consisted of a double inclined plane with a pelvic post inserted against the femur and was adjustable. "In treating oblique and compound fractures of the leg, when there is shortening, extension (he meant traction) is made through the medium of the foot board and counter-extension by the thigh-plane. In treating compound fractures of the leg, I place it in a shallow fracture box made of wood or tin, partly filled with bran, which makes the best possible cushion for the leg. Extension can be made as early and effectually as without it."

Dr. Kittoe of Galena reported on a new apparatus for fracture of the leg consisting of two steel bars connecting below the foot by a cross bar. A foot piece on this fitted with a threaded bar could be attached to adhesive straps for traction. Counter-extension was made by two pads attached to rods by set screws which rested against the bulge of the side of the knee. This could be suspended like Smith's anterior splint.

Dr. Andrews exhibited a new mouth gag. In a most timely paper he also declared that he had abandoned the use of chloroform in Mercy Hospital nine years before because it was dangerous in surgery. But it was acceptable in midwifery. He now used sulphuric ether. Recently this same change had been made at the Cook County Hospital. There was at that time *no* large hospital in Chicago using chloroform as its anesthetic. He published a list of collected anesthesia administration from the United States and from Europe: 92,815 anesthetics by ether, 117,078 by chloroform of which 43 died, a ratio mortality of 1:2723.

Dr. Prince presented a report on orthopedic surgery. He also talked at length on how "to disinfect sutures and ligatures." He said that "the superiority of silver sutures had been established but that it was still desirable to obtain the flexibility of linen, silk and cotton with the non-irritating character of silver. . . . If we can have a suture which is as unirritating to the living tissue as silver wire, and in addition to this negative quality of not exciting inflammation is also a disinfectant (having a positive quality of preventing putrefaction), we have an improvement upon the silver wire."



He proposed: "Mix together in the melted state, 1 part of crystals of carbolic acid and 4 parts of beeswax. Mix 1 part of melted crystals of carbolic acid and 8 parts of simple cerate. Employ strong linen thread thoroughly smeared with the carbolized wax, the smearing of the threads having been done before the time of their use. Then at the time of using them draw the thread through the cerate. This gives them such a facility for gliding, that as sutures, they cause scarcely any friction upon the living tissues leaving them with the least possible tendency to inflame. (They did not realize asepsis.) Carbolized sutures are superior only for a short time. If the suture should remain more than four days, silver must sustain its supremacy because by that time the carbolic acid is nearly or quite lost by solution; and as the wax can never completely saturate the thread, the *animal fluids absorbed into the suture* became putrid and the source of the infection." (Sic!)

The use of acupressure to stop bleeding was referred back to the report in 1867. There was given a report on epithelial transplantations as an important resource for plastic surgery. These correspond to our present ideas of pinch grafts and many took, in spite of suppuration. They failed (and the author quoted Hodgen) in cases where the application was on granulating surfaces. He quoted Dr. David Page of Edinburgh who had shaved off the layers of cuticle with a razor or scalpel, brushing them from the blade of the knife onto the granular surface. A strip of adhesive plaster was then laid over the cells thus transplanted. *This is the first recorded compression dressing used in Illinois.*

Dr. Prince also described rhinoplasty (after John Wood of Kings College Hospital in London), using a flap from the upper lip and also one from the arm. Canthoplasty and cheiloplasty and obliteration of facial adhesions after burns were described. The report continued on intestinal plastics, advising continuous suture lines and noting the prompt adherence of peritoneal surfaces. He advised a stationary position of wounded parts after plastics, i.e. splinting. He closed a colostomy occurring after a hernia operation. He quoted Velpeau and Dupuytren on their intestinal forceps used in colostomy operations much like that used by Mikulicz later. He closed with "Fusion and Extroversion of the Bladder and Epispadias" and credited Pancoast with the idea of inverting the skin to make a substitute for mucous membrane in an artificially contracted bladder. He quoted: "In plastic operations in the urinary or sexual organs, it is unnecessary to leave a catheter in the bladder so long as the urine is acid, while such operations should not be performed if possible, while the urine is alkaline." A weak solution of sulphuric or nitric acid was used as a lotion in these operations for several days.

Prince's talk included vertical curvature of the spine, i.e. scoliosis.

Davis's (New York) back splint was described but he condemned it by saying that its so-called lifting qualities were nil and he favored the Taylor brace, which was well illustrated in the paper. He mentioned a sole leather brace of this order illustrated by Dr. J. S. Sherman of Chicago in the *Chicago Medical Examiner* for October, 1869. He advocated traction for all joint inflammation, and exhibited a posterior side iron splint for the leg to help extend the foot or to correct in talipes. He also showed (there are cuts in the report) a substitute hand for use after amputation; this had a metal clasp with which to hold objects much like those in use at present, and there was an elastic strap attached to the chest for its manipulation.<sup>4</sup>

1872

Dr. S. C. Plummer of Rock Island was elected delegate to the American Medical Association. Dr. Edwin Powell, surgeon at the Cook County Hospital, reported on "Transplantation of Cuticle" in defects of ulcers and large granular surfaces. Erysipelas was very common in the hospital at that time, and small grafts with adhesive tape coverings were mostly failures on account of suppuration.

Dr. A. L. McArthur of Rockford reported on "Restoration of Bone," citing two open fractures of the femora from gunshot wounds; good regeneration and healing followed when he removed loose bone displaced from its periosteal connection. There followed a long discussion on the transplantation of heterologous bone and the regenerative powers of the periosteum. The speaker said that it was firmly established that "the blastema of ossification, as laid down by Kolliker and Virchow, belongs to the layers next to the bone." This law had been formalized: "In the upper limb, for the bones of the arm and forearm, it is the extremity which contributes to the elbow that grows the least. In the lower limb for the bones of the thigh and leg, it is the extremity which contributes to the knee that grows the most." This law of growth, so promulgated, explained why "resections of the knee are followed by an arrest of development, while resections of the hip and ankle are not. Conversely in the upper extremities, shortening follows excision of the shoulder and wrist joints. The same law seems to determine the growth of morbid products (bone tumors). Thus exostoses, enchondromata, etc., appear preferably at the end of the bone which grows more rapidly." This was an excellent elementary observation. We at present state it as the law of the epiphyses based on the direction of the nutrient arteries in long bones. Today the medical student must learn

<sup>4</sup>One of the bills allowed at this meeting was "To printing 100 blank certificates for railroad passes for the meeting in Dixon—\$5.00." Also one for \$3.00 for "engraving two cuts for paper on surgical use of plaster of paris in fractures." Those certainly were the days that have gone forever!

that "the nutrient arteries of long bones are directed toward the elbow and from the knee and that the epiphysis toward which they are directed unite first," thus giving greater and longer growth in knee, shoulder and wrist regions.

Dr. McArthur also spoke of Virchow having shown that connective tissues and cartilage are interchangeable equivalents which can replace each other and which often proceed from the same source. "The doctrine was established that not only periosteum, but the marrow, cartilage and connective tissues are each and all osteogenetic. These tissues do not possess the bone forming power alike, nor are the circumstances under which they exercise this power, the same." Surgeons are anxious at present that in fractures and other injuries of the bones every vestige of periosteum be preserved. During the Civil War, however, our surgeons were encouraged to dissect as much as possible of the periosteum from the bones removed at the elbow, the hip joints, the hand and wrist, indeed wherever the bones were easily accessible.

1873

Dr. D. A. K. Steele was admitted to membership in the Society at this meeting.

Dr. J. L. White of Bloomington was chairman of the Committee on Surgery and his report stated that in the last year, surgery had been uneventful even "in the literature within my reach I find nothing startlingly new, challenging wonder and admiration." The main question before the surgeon at that time was "What and how much can I save?" The answer—"Trust Nature even a little beyond what judgment dictates."

Dr. White spoke on amputations: "Unnecessary surgery, either as to the operation performed or the amount sacrificed, is butchery." He quoted Dr. F. Seymour from the *Half Yearly Compendium of Medical Sciences* for January 1873: "There is no such thing as union by first intention; that the flaps are not the sides of a wonder box, to be glued together and expected to remain so; but that new matter must be deposited and organized physiologically before a cure can be effected . . . and that especially in amputation of the thigh, it is better to defer the bringing together of the flaps until 10 or 12 days have elapsed, and granulations are covered with creamy pus; and that their union will be prompt and danger from pyaemia avoided, thus lessening mortality in these amputations." The writer notes that those thinking surgeons seemed to cling to pus *bonum vel laudabile* and yet to recognize infection and pyemia with no control over it. Possibly the creamy pus mentioned was the result of milder infections of staphylococcus albus which was not so deadly.

White also talked of exfoliation of the ends of bones. He mentioned a better way than that devised by Mussey of Cincinnati who had proposed



dissecting up from the bone to be removed sufficient periosteum to cover the end of the bone. The bone was to be sawn in such a manner as to leave the end convex. The use of drainage tubes was also advised as advocated by Andrews of Chicago. He recalled that Sims had described the use of fenestrated drainage tubes extending down into the vagina or the cul-de-sac of Douglas.

The death of Napoleon in the last year was discussed; it was said that his death was hastened, if not entirely brought about, by the operations he had undergone for crushing stones in the bladder. Dr. White related five recent urethrotomies for stone by Dr. W. Hill in Bloomington, all of which were successful.

In spite of the barrenness of the year's progress in surgery, the chairman continued with his talk on "the diseases known under the generic term, Cancer . . . . These were heretofore generally considered local manifestations of a constitutional taint. They are now believed to be primarily local. There is no dyscrasia of the blood, but of the cancer cell or cancer cylinder which was originally a white corpuscle obstructed in its course and changed in its character while passing through some dense obstruction. . . . All other forms are as purely local in their origins as is the epithelial." He made one of the first pleas for early local excision of cancer.

The subject of shock was also discussed. Its treatment by stimulants was objected to, the use of alcohol was decried, and a preparation of opium along with dry heat was advised to avoid further strain on the nervous tissue. "The condition of shock, probably, in a majority of cases, conduces to the safety of the patient by the prevention of hemorrhage." He doubted the value of "bleeding" and said "as elsewhere, in *medio tutissimus ibis*."

Speaking of caries of bone, White referred to Dr. Gunn's suggestion of "filling the cavity with a plug of carbolated wax" which had an advantage over cotton. They also used linseed oil with silver nitrate and placed over this a large dressing of cotton batting for pressure, slowly removing the cotton later. He also stated that sulphuric ether was the safest anesthetic and was better than nitrous oxide. Chloroform had been recognized as an unsafe agent.

In the discussion on shock, Dr. Prince was in favor of the use of alcohol. Dr. Andrews asked if anyone had used oxygen inhalations, stating that Dr. McGraw of Detroit (inventor of the McGraw rubber ligature for gastro-enterostomy) had employed it successfully. Nothing had as yet been stated about blood pressure.

A report on the treatment of fractures in Illinois was made by Dr. J. B. Hamilton of Kane County, in which he stated that fracture of the femur was of first importance and that treatment with a long lateral splint gave good results. Dr. Plummer of Rock Island said he used Truesdale's fracture

bed, but that he could not find any better results than those of Sands of New York using simple plaster of paris bandage. He told of his use of the Hodgen splint and the results of treatment of fractures of the tibia, humerus, forearms and clavicle, citing one case of Barton's fracture treated by a straight dorsal and palmar splint according to Collins of Dublin. Colles' fracture "about which volumes have been written, scores of splints and manifold dressings invented" demonstrated plainly that a satisfactory mode of treatment had not yet been found. He described the method of reduction used by Morris of Rochester, New York, based on the supposition that the fracture was complicated by dislocation of the ulna.

In the discussion, Dr. Prince belittled the good results reported in fractures of the femur and tibia with healing and no shortening, saying that *he* did not get such results and that this kind of a report was dangerous to put out in the *Transactions* as the courts would rule that it was the dictum of the medical fraternity for all time and it would cause trouble in law suits. This was a serious and wise objection, displaying factual observation. To show his thoroughness, he cited the case of a 15-year-old boy who fell into a well and sustained an oblique fracture of one femur. The limb was put into a long side splint and traction applied. Healing resulted in seven weeks and the broken limb was then found to be one-half inch longer than the unfractured leg. Two years later, however, it was again measured and found to be shorter, and in that year the boy was accidentally killed. Dr. Prince made a postmortem examination, took out the whole femur, and found that it overlapped 1 inch at the healed fracture site. He warned his colleagues that it takes a long time for bones to heal so firmly that they will not move when the splints are taken off, and that a doctor might be cited before a jury a year or so after treating a fracture to show why it was set 1 or 1½ inches shorter than the mate. He thought the Society should say a *cure without shortening is the exception* rather than the rule, although he might except transverse fractures placed end-to-end and completely adjusted. He advised also that if 100 fractures of the femur were examined, there would be found but few transverse fractures; almost uniformly they would be oblique. He was wise before his time; with no x-rays, he was truly a great observer. Dr. Hamilton seconded Dr. Prince's proposal, and Dr. Prince said that he had never seen, in 20 years, a case without shortening, and that he would be ready to testify before any court that a shortening of ½ to 1 inch *is a good result*. Thus they agreed.

1874

Dr. W. P. Peirce of Lemont read his Report on Surgery, in which he said that that was an era of brilliant progress and that he wished to select four topics to illustrate it: (1) bloodless amputation; (2) aspiration; (3) the

bivalve splint, and (4) anesthesia. In discussing the last topic, Dr. Peirce referred to a case of ether vs. chloroform submitted to a coroner's jury in Boston; one Harvard professor called to testify relative to the fatality of the two anesthetics stated that *all his knowledge upon the subject was derived from some statistics which were published in Chicago in 1870*. Thus Illinois contributions sprang into the limelight. Although ether was claimed to be first used in Boston, it is noted they did not neglect to condemn chloroform. This produced a profound impression on the medical profession and the speaker at this meeting of the Illinois State Medical Society shared the idea. He said he had administered chloroform one thousand times without alarming symptoms "yet it is undesirable and is capable of producing death when no possible danger could have been anticipated." Henceforth he was going to use ether. He thought that failures to induce anesthesia with ether (reported by some practitioners) was due to the fear of it and because too small a quantity was given.

Remarks were made by Dr. R. Roskotten of Peoria on the use of continued immersion for compound fractures and lacerated and pointed wounds. An open fracture of the forearm was kept for six days in a tin basin filled with water, constantly renewed at an equable temperature with the patient, followed by a plaster of paris dressing. The beneficial effects of immersion were given as: (1) the water protects injured tissues against the influence of the atmosphere; (2) it keeps them clean, since all matters thrown off are readily removed, and (3) it does not exclude the use of other drugs, such as carbolic acid.

1875

Dr. Joseph W. Freer of Chicago reported on the transfusion of blood. He said that Sir Christopher Wrenn made the first experiments on transfusion: "A way to convey any liquid into the blood, by making ligatures on the veins and then opening them on the side of the ligature toward the heart, by putting into them slender syringes or quills fastened to bladders." (This was in the manner of Clyster pipes containing the matter to be injected.) Dr. Freer said that for the previous nine years he had performed experiments at Rush Medical College in which he had bled dogs all out from the carotid artery (syncope), defibrinated the blood, and injected it into the jugular vein. He had thus resuscitated all but one animal, and one dog thus treated was alive after one year. There was reference to the technic of transfusion by direct arterial connection or by a double nozzled syringe. Also the use of lamb's blood and the fatalities following it were discussed. A case from the Cook County Hospital was cited of hemorrhage and shock; the patient was given by transfusion 8 ounces of blood from an uncle (a physician) and recovered. Details were given of dog experiments



to ascertain the length of time blood retained its nutrient and vivifying qualities, and Dr. Freer stated that he even used some blood kept in the refrigerator 48 hours with successful revival of a bled-out dog. He advanced the idea of saving blood for future use, and the use of animal as well as human blood. *This may well represent the birth of the Blood Bank in Illinois.*

Dr. John N. Niglas of Peoria discussed congenital and strangulated hernia, its pathology and indications for operation. He talked of exercises and trusses for children. The discussants brought out the question of opening the sac at operation, fearing strangulated bowel or infection. Dr. J. B. Hamilton said he had used many kinds of trusses but had never known of a cure of hernia resulting from their use.

A report was given on leg shortening after fractures, including the legal relations of the subject. Dr. W. P. Peirce of Lemont stressed the importance of diagnosis in all cases. He advised against waiting for the swelling and inflammation to subside, urging that the fracture be restored as soon as possible to the most accurate position of fragments and then retained in place until union was complete. Dr. Freer stressed again the fact that a limb could not be expected to become perfect and that prognosis should be guarded. He warned of the powerful muscles of the thigh pulling against the splint, and pointed out that people expected too much of the surgeon. He praised Hamilton for exposing the imperfection of some treatments being advocated at that time, and said that the Illinois statutes contained no clear laws bearing on the doctor's liability; only ordinary care and judgment were demanded.

The use of a vaginal bivalve speculum and vaginal retractors was introduced at this meeting.

1876

There was discussion on bloodletting and an almost unanimous approval of the practice. A paper on "Contributory Negligence" was read by Dr. M. A. McClelland of Knoxville.

Dr. Moses Gunn, Chairman of the Committee on Surgery, reported that the committee was attempting to get a clearer vision of progress in physiology and pathology as related to surgery. There was discussion of complete extirpation of the os calcis and its regeneration, if periosteum were left behind. This treatment was applied to comminuted fractures and possibly infected wounds of the heel. Malgaigne's hooks and adhesive strapping for fracture of the patella were mentioned.

The next subject was chronic enlargement of the prostate for which suprapubic drainage of the bladder was used, leaving in a long tube in an effort to establish a permanent urinary fistula.

A 45-degree elevation of the foot of the bed was advised to reduce hernia.

Dr. Gahn, a chemist in Upsala, Sweden, recently had advised the use of boric acid as a new antiseptic, as already tried by Lister. Employing large compression dressings, boric lint had been applied to burns and found better than carbolated oil.

Dr. A. C. Rankin reported on morbus coxarius, the method of continued elastic traction devised by Davis of New York being used.

1877

Dr. T. D. Fitch reported that he had discovered the structure of blood corpuscles and had demonstrated it to English and Scotch doctors in 1868.

Dr. Freer died at this time from meningitis following undue exposure in the cold anatomy laboratory while teaching.

Dr. E. Fletcher Ingals reported on an improved method of performing a radical operation for empyema thoracis.

1878

Dr. G. L. White as President said: "In a country like ours where all are striving after the almighty dollar, and especially in times of financial trouble such as we are now passing through, we find a large class of persons with overtaxed brains suffering from a great variety of ailments symptomatic of nervous prostration." He also quoted Dr. L. Yandell, Jr., who said: "It is my belief that from the sick, and not from the laboratory, from experimental therapeutics and not from the microscope, our practical knowledge is to come." Dr. White continued: "To this I cannot give my entire assent, but it has in it a great deal of truth." There was evidently still some block to progress by early scientific methods.

Tarnier's forceps for obstetrical use were described. Dr. D. W. Graham of Chicago was then editor of the *Medical Register*.

An Act to regulate the practice of Medicine in Illinois had been passed by the State Legislature in 1877, which also created the State Board of Health.

Dr. Gunn was again Chairman of the Committee on Surgery, and he reported that there were but few points in the literature of the past year which he was inclined to call to the Society's attention, but he did give a review of the literature. He then reported the investigations of a committee appointed in 1876 by the Surgical Society of Moscow, and mentioned Newman's (Western Infirmary, Glasgow) instrument for "aortic tourniquet" to save all the blood possible in amputation at the hip joint. Dr. Gunn personally had no use for excision of the knee joint, not from the standpoint of any particular method of operation, dressing or after treatment, but "because the section is made through cancellous bone tissue at that point of the head of the tibia and the condyles of the femur where the bone is

the largest and disfavors rapid repair (what a wrong conclusion!) and favors absorption of septic fluid." So much were these early surgeons handicapped by the ever-present and unfailing wound infection!

Dr. Gunn then reported on Dr. Henry H. Martin's (Massachusetts) use of an elastic bandage for conditions other than hemostasis (Martin bandage), and the observation by Dr. Wright of Brooklyn of different length of legs in a high percentage of measurements was reported. Also Bigelow's recent report of eight cases of lithotripsy under ether, at one sitting both crushing and evacuating bladder stones, was described, including a similar case of Gunn's.

Dr. Edmund Andrews and Dr. David Prince spoke of their belief in antiseptic treatment of wounds; also of the dry scab which formed on aerated wounds and acted as a barrier to bacteria, "causing restraint of their propagation because there was no moisture." The fact was also mentioned that the agency of putrefaction might resist chemicals such as carbolic acid, but it could not resist *repeated boiling*. Immersion of the operated part under water to keep the putrefactive agency away was suggested, as well as laparotomy under water at 110° with salt and salicylic acid added. Dr. Prince reported a gunshot wound of the forearm which had been kept immersed four months, using 1 gram of carbolic acid and a little salicylic acid to the ounce of water, without any odor or decomposition developing at any time. The water was changed once a day and kept warm by a lamp.

Dr. Gill, in discussion, said: "In the latter part of the war, surgeons found that when they could have the patients placed so as to be surrounded by a pure atmosphere and the secretions in the wound kept free and not pent up, they recovered. It was for that reason and not that the bacteria were carried away, not that pus itself was poisonous, *nobody supposed that*, but if that pus should be allowed to remain in contact with an open wound or was pent up, then fermentation and decomposition followed, whether the poison was chemical, vegetable or animal." We can thus understand how difficult it was to win the fight against sepsis and the old fashioned ideas of putrefaction.

1879

The Report on Surgery by Dr. John E. Owens included the treatment of fracture of the femur. Dr. Sarah Hackett Stevenson of Chicago read a paper on disorders of the sympathetic nervous system. There was also a discussion on the introduction of the metric system in medicine in Illinois.

Dr. Owens's report also concerned the following:

1. Radical cure of hemorrhoids for which injection with equal parts of carbolic acid, glycerine and water was advised, 10 drops into each hemorrhoid. They feared peritonitis and embolism.

2. The treatment of boils with arnica was described according to Dr.



Planat of Lyons. This was assured as a cure in all cases except those accompanied by diabetes. This observation indicated as early as 1879 that infections were difficult to control in that disease.

3. Dr. Bull's method (Chambers Street Hospital, New York) of controlling dislocation of the acromial end of the clavicle by means of a paper compress held by adhesive tape was discussed. (This method was practiced as late as 1910.)

4. Operative cure of epithelial carcinoma of the larynx and esophagus according to von Langenbeck's method, using chloroform and a low tracheotomy was described. The anesthetic was really an intratracheal one given through the tube and may have been the earliest tubal anesthesia in Illinois.

5. The removal of carcinoma of the tonsil by external incision was reported by Dr. Cheever of Boston in which hemorrhage was controlled by the use of ice and ligatures.

6. Left lumbar colostomy for relief of bowel obstruction as performed by Drs. Cutter and Homan of Boston was discussed.

7. Operations were advised on the inverted head to avoid flooding the trachea with blood (aspiration pneumonia).

8. Many advantages were attributed to the use of thymol as a new antiseptic agent; von Volkmann had used it freely.

9. Treatment of nevus by compression pins was described.

10. Dupuytren's contraction was reported curable by subcutaneous dissection of the palmar fascia with immediate straightening out of the flexed fingers by means of splints left on four days; the dressing on the hand then left in situ for two or three weeks. This method was lost sight of and only recently revived, but without credit to former surgeons.

The surgical pathology of peripheral nerves was Dr. Owens's next subject. More frequent nerve suture was advocated, quoting Bluck of Berlin. Wheelhouse's case of recovery nine months after nerve severance was reported; the bulbous ends of the nerve had been cut off and the two nerve ends were sutured with carbolyzed catgut. The man recovered and walked well.

The irregularity of length of normal limbs and a report on an important suit for malpractice was given. Dr. Andrews, in discussion, said that 20 years before, in the dissection room at the University of Michigan he had demonstrated frequent disparity in the length of limbs. Dr. C. Truesdale of Rock Island reported on fractures of the femur in which he quoted a resolution adopted by the Surgical Section of the American Medical Association in instances of fractures of long bones. Shortening was the rule regardless of any methods of treatment used. Dr. Truesdale considered that shortening was caused by reflex contraction of muscles of the thigh on account of pain, plus the loss of bony continuity. The following rules were

listed for overcoming shortening: "(1) All shortening must be overcome at once; don't wait to treat muscles by stretching. (2) All fractures of the femur must be dressed in a flexed position. (3) A fixed and immovable position of the pelvis is essential for the best results. (4) All lateral supports exercising pressure are pernicious; they disturb the action of nerves and pressure on injured tissues causes pain and vesication." He advised, therefore, "the use of a triple inclined plane" and described a fracture bed with planes built into it, the body at 45 degrees with the bed frame and the leg at 90 degrees with the thigh.

Additional discussion on fracture treatment concerned the *time* when a fracture should be reduced. The majority of speakers believed it should be done as soon as possible. Extension and counter-extension (traction) were advised, and Buck's extension was discussed. Some used plaster of paris splints. Silicate of soda was used by Dr. Gross.

1880

The Report on Surgery was given by Dr. William Hill of Bloomington, who described a method of urethrotomy by cutting through the prostate gland. There was also discussion of the hazardous operation of cutting into the abdominal cavity for strangulated inguinal hernia, thereby wounding the peritoneum and endangering the life of the patient from peritonitis. Many surgeons testified that they preferred the practice of forcing the abdominal integuments on the end of the thumb up into the abdominal ring and so dilating it to permit a return of the protruding intestine back into the abdominal cavity. (It seems unfortunate that at that time their anti-septic precautions could not have assured clean wounds. The surgeons had adequate anatomical knowledge and a fair idea of the pathology, but lacked clinical experience which was to be obtained in later years under the advantages of asepsis.)

Antisepsis and Lister's teachings were aired again. "Putrefaction in wounds and abscesses is analogous to the fermentation of a saccharine solution under the influence of the yeast plant and it is due to existing development of minute organisms." They believed that the problem of the moment was to exclude air (oxygen) according to the old ideas, but to dress wounds with an agent capable of destroying all organisms without injuring open wounds or living tissue. The antiseptic plan of treatment had been proven of practical utility in the treatment of compound fracture. The speakers all approved of carbolic acid. They used it in amputations, employing a spray and carbolized ligatures and sutures. They also closed flaps and got primary union. Thymol was also used.

Excision of the floating kidney was described as reported by Dr. Cripps of England. Two instances of excision of carcinoma of the rectum were re-

ported, and Dr. R. N. Isham of Chicago described one he had performed at the Cook County Hospital. Osteotomy for knock knee was discussed, and 120 cases of fracture of the patella reported by Dr. Hamilton were reviewed. The method employed by McGill (a Scotch surgeon) was described in which he obtained a gradual drawing together of the fragments so that they became united by a ligamentous band.

In discussion, Dr. C. T. Parkes of Chicago said that it was dangerous to reduce strangulated hernia, and claimed that antiseptic surgery had made the operation so safe that there need no longer be any hesitation to open the abdomen, sac, et al. He believed that thymol was not as good an agent as carbolic acid, and reported that they had both been tried at the Cook County Hospital with the result that thymol was discontinued in favor of carbolic acid. His final remark was that carcinoma of the rectum more than 3 inches above the anus could not be removed via the anus as there was danger of a tear into the peritoneal cavity. *We must admit that he knew his anatomy from a practical standpoint.*

Dr. W. P. Verity's universal suspension splint (suspended from the ceiling) was discussed. This was a metal splint on which the patient lay with application for traction permissible. It was used for fractures of the vertebrae, pelvis and thigh, for resection of the hip or knee, as well as for extensive burns. The entire splint was covered to conceal the iron work and it cost \$10.00!

In the 1880 issue of the *Transactions* there is published a letter from a man who had visited Boston, then the hub of medical instruction. He said: "I noticed that in fractures of the leg, especially compound, the good old fracture box is still used, and for the thigh, extension by weight and pulley, and short splints are used, and the results are most satisfactory. I think that here less weight is used than is customary by some surgeons I know, and less than in the hospitals I have visited. The antiseptic method has been tested in this institution (Boston City Hospital) but now rather fallen into disuse, as the results were not, in the hands of the surgeons here, those claimed for it by Lister and others. Dr. Blake reported 19 cases of empyema treated by permanent openings of the thoracic cavity; 15 cured. He also cited a case of avulsion of the scalp which had 2600 pieces of skin grafted, once a week for three years, the grafts being furnished by 180 different persons." The letter was signed by R. M. Lackey.

1881

The report of the Committee on Surgery was given by Dr. Charles T. Parkes of Chicago. In his discussion of the handling of wounds he said: "The wonder results obtained . . . under 'Listerism' or antiseptic surgery, led to an almost universal adoption of this method of treatment of wounds,



certainly by the younger men of the profession. The older men, in many instances, stand aloof from the method. Bancroft and Tait in England are reported as having discarded the spray of carbolic acid in major operations and in ovariectomies. The following plan seems to be universally accepted by surgeons: (1) Free drainage by a strand of silkworm gut or horse hair for 72 hours. (2) Close coaptation. (3) Perfect rest. Rubber tubes for drainage although clean, were recognized as a source of suppuration by some surgeons. Bone tubes (Neubauer) had been used for drainage, and MacEwen (Glasgow) used bird bones (as chicken legs). . . . They used catgut prepared by Lister's method. There were some secondary hemorrhages, in which case the surgeon went back to silver wire or waxed silk or silkworm gut, for control. Rest included splinting and equable pressure of pads and bandages. Lister at that time is quoted (on his theory for the need of antiseptic surgery): 'Theory, there is no theory about it . . . it is a solemn fact.'

There were remarks on vein ligation for varicocele, also an approving report on antiseptic surgery for open ligation and nerve stretching or restoration by Dr. R. G. Bogue of the Cook County Hospital. Using fresh cadavers, he had performed experiments to determine the tensile strength of nerve trunks, and presented a table of the strength of various nerves, and he thanked Drs. E. P. Davis and A. D. Bevan for their help.

Dr. Thomas J. Maxwell of Biggsville, Illinois, gave a report on intracapsular fractures of the femur in which he said: "Remarkable changes take place in the nutrition of the head and neck of the femur in older persons . . . spongy tissue becoming more rarefied and filled with fat." He noted that union did not take place for the following reasons: "(1) Defective vascularity; vessels which supply the head of the bone enter its substance through the ligamentum teres and the reflecting portion of the capsular ligament. When fractures take place the bone must depend entirely for its vitality upon the arterial branch which ascends the round ligament, a supply barely sufficient for its own existence and sometimes not equal to that. (2) No supporting accessory structure as a connective tissue to act as a nidus for supporting material (callus). (3) Reparative material furnished by vessels greatly diluted with increased synovial fluid, incapable of progressive organization. (4) Maladjustment of fragments and inability to maintain perfect quietude so necessary to repair, and finally (5) spastic action of the muscles on the distal portion of the bone." All this he quoted from Agnew's "Surgery"; it was so understood in 1881.

Dr. Edmund Andrews reported on "Experiments in the Use of Chian Turpentine, Mastic and Sulphur for Cancer," according to the method of Clay of England. The use of turpentine pushed its price away up; the total amount of genuine Chian turpentine ever brought into Chicago was

less than 15 pounds. Gum mastic was also difficult to obtain and much of the material sold was spurious. Dr. Andrews reported on over 20 cases; 2 were cured completely, 8 were improved and 7 were total failures; 1 was supposedly greatly benefitted by sulphur alone. He concluded that every cancer, in proper location, should be cut out early and the remedy (if any) taken afterward. Thus was shown the hard-boiled wisdom of our Illinois surgeons. This dictum may well be repeated today.

Dr. Roswell Park read a paper on "The Surgical Anatomy of the Sheaths of the Palmar Tendons." He had performed experiments using injections of plaster of paris, wax, paraffine and glycerine and then had made dissections. He gave a scholarly report on phlegmon in the sheaths.

This was followed by a paper on Listerism and carbolic acid by Dr. Truesdale who stressed the point that the action of the acid, in addition to being antiseptic, was also hemostatic, anesthetic and antiphlogistic. (It seems remarkable that they did not have more cases of gangrene of the extremities, as they often left limbs wrapped in 3 per cent carbolic acid solution for hours or days. Possibly gangrenous cases were never reported.)

## 1882

A paper on "Phenic Acid in Cancer" was given by Dr. E. Wyllys Andrews of Chicago, and one on "The Diagnostic Peculiarities of Malignant Growths" by Dr. Christian Fenger.

Dr. E. W. Lee of Chicago gave the report of the Committee on Surgery. He believed that the year had been unusually progressive on account of the meeting of the International Medical Congress in London in August, 1881. The subject of antiseptic surgery was uppermost in all minds, and he said that a year previously the hissing of the carbolic spray might have been heard in every operating theater, but 18 months after Brun's edict had gone forth ("fort mit den Spray"), the reports of surgical operations showed as good results without as with the spray. Irrigation with carbolized water was employed instead. To Lister, however, must be given full credit for the application and success of antiseptic methods, and 1880-1881 marks the full acceptance of antiseptic methods and the abandonment of the carbolic spray, thus really leading to the inception of aseptic surgery.

Lee continued his report by saying that the promotion of primary union of operative wounds was also discussed at the London Congress, and it was at this meeting that Letievant of Lyons, France, *insisted upon the prime importance of disinfection of the hands, instruments, etc.*, as a means of avoiding putrefactive fermentation. Tait of England had renounced the carbolic spray and said, backing up Esmarch's dressing: "What can be more dirty, in the ordinary acceptance of the term, than a wound left covered up with the same dressing for weeks together, the original blood

and serum remaining upon it intact, yet surgically clean because *aseptic*. On the other hand, the esthetically cleanly water dressing is surgically dirty, because it contains elements which give rise to septic changes in wounds." This is the first mention found of aseptic surgery; it was known to our forebears in Illinois in 1881, thanks to Lee and to the report of the London Congress. Lee cited his own experience in seeing how antiseptic dressings were applied (in London?) and said few were perfectly done. It is obvious from this statement that there were purists in surgery in Illinois even then, and the power of observation led to improved local technic on a critical basis. Lee also said: "Therefore I do not think, today, that I would be justified in opening a joint or the thoracic cavity without its protection (the spray)."

In continuing with his report of the London meeting, Lee reviewed Czerny's paper on the relative value of carbolic acid and iodoform as antiseptic agents in which he said: "The history of the surgeons suffering from carbolic acid poisoning is yet to be written." He gave the symptoms as headache, bronchial irritation, languor, loss of appetite, dragging pains in the kidney region, heavy feeling in the legs, nausea, pruritus, insomnia, and an anemic appearing face. Lee had suffered all of these and, hearing of iodoform, he substituted it for carbolic acid. Later, however, the poisonous qualities of iodoform were recognized and reports of its poisoning were made known.

Dr. Lee also reported on sponge grafting on healing surfaces, using decalcified sea sponge boiled in carbolic acid as a compression dressing to stimulate epithelial growth. His report also covered MacEwen's (Glasgow) bone grafting in which he used cut up fragments containing all the bone elements. Lee also talked of precancerous conditions of the lip, tongue, penis, etc., and stated that cancer was engrafted on chronic inflammation as after syphilitic leukoma of the lip, tongue, etc. He also cited the case of a woman operated upon by Dr. Fenger; her entire uterus was filled with carcinomatous infiltration yet she was well after several *months*.

Dr. E. Wyllys Andrews then spoke of the most eligible antizymotic or "internal antiseptic" to destroy bacteria within living tissues. This had generally been believed to be carbolic acid administered singly or with iodine, bromine, arsenic or ammonia. He said that Declat had used pure carbolic acid internally and claimed that it cured such lesions as carcinoma of the lip, but that he had examined the case and found no real induration. A doctor who had seen the patient before he consulted Declat and before treatment, said the lesion was simply a chronic ulcer; hence Andrews was exposing as false the cure of cancer by phenic acid.



1883

The report on Surgery was given by Dr. John E. Owens of Chicago in which he discussed nephrectomy for scrofulous (tuberculous) kidney as presented at the Clinical Society of London. The 12th rib was excised to remove the kidney and the patient died. Darrah recommended retraction of the rib instead of resection. He spoke of digital exploration of the bladder through a perineal incision as practiced by Sir Henry Thompson, and of colectomy suggested by Dr. John Marshall which closely resembled a Mikulicz operation of today.

Darrah also mentioned wounds of the heart, quoting an article in the *Lancet* for March 10, 1883. It was argued that wounds of the heart should have the same attention as any external wound. The Germans had reported deaths in their cases from asphyxia following hemorrhage into the pericardium (Herztamponade). Block had experimented on dogs and rabbits to show that wounds of the heart could be successfully sutured. All the animals survived. By means of a suture through its apex, they pulled on the heart so strongly that the heart beat and respiration ceased; then the suture in the wound was quickly placed.

Darrah reported on removal of a mediastinal tumor by Kuster of Berlin, and of a transpatellar excision of the knee following a transverse cut across the patella by a saw. The soft parts were turned up and down, the knee later was sutured with carbolized silk sutures, and primary union ensued. He closed his report by telling of a new method of reducing dislocations of the humerus and of the treatment of hydrocele by leaving a bougie inserted in the punctured sac 24 to 30 hours.

Dr. Holtin of Smithville reported an instance of dislocation of the right kidney in a 28-year old woman. He reduced the kidney into normal position and held it with cotton batting and a steel spring. Later he had three skeptical colleagues go with him to see the woman; by putting her on her left side, he could dislocate the kidney and then reduce it. He did this twice to the delight and satisfaction of his friends and they departed convinced.

1884

Several voluntary short papers concerned: (1) "Fracture of the Greater Tuberosity of the Humerus with a Case Report" by Dr. F. C. Schaefer of Chicago; (2) "Surgical Treatment of Gangrene of the Lungs" and (3) "Excision of the Hip and Knee Joints" both by Dr. Christian Fenger of Chicago; (4) "General Principles and Treatment of Potts Disease" by Dr. C. E. Webster of Chicago. There was an exhibit of a new suspension splint by Dr. W. P. Verity of Chicago. The Standing Committee on Surgery was made up of Drs. Roswell Park, Chicago; David S. Booth, Sparta, and J. D.

Whiting, Petersburg. Dr. G. V. Black was appointed as a Special Committee on Oral Surgery.

It was reported that the causes of death as given by the State Board of Health were quite inaccurate because, of the entire number of deaths reported in 1882 and 1883, the causes of only 22 were given; 5 were from pneumonia and 4 from overdoses of morphia. A Committee on Original Investigation was appointed to inquire into this. There was also considerable discussion about obtaining sufficient material for anatomic dissection. New legislation was advised, and the doctors were asked to help. Antivivisectionists at that time were not organized.

Dr. Park's report on surgery for the year noted the publication of the third volume of Agnew's "Treatise on Surgery" and Holmes's "System of Surgery." It was also announced that the "International Encyclopaedia" and the "Deutsche Chirurgie" were approaching completion. The report continued with a long list of items somewhat as follows: Surgical dressings and the carbolic spray were mentioned. Little was now heard of the latter and it was noted that it could be dispensed with as, in his last 1000 operations, he (Park) had used it only three times; his operative mortality was 6 per cent. The general principles of antisepsis had become established, and cleanliness and surgical cleanliness were no longer synonymous. The irritant qualities of carbolic acid were better appreciated, and weak solutions of corrosive sublimate (1:1000-5000) had supplanted the use of carbolic acid in nearly all foreign and domestic clinics. Iodoform was, however, still used for many purposes, and naphthaline gauze and ointment had been introduced into active surgical use. Professor Kocher's method of preparing catgut was stated to give complete satisfaction; the catgut was soaked in oil of juniper berries two or three days and was then transferred for keeping into absolute alcohol containing 1:500 corrosive sublimate, thus yielding a good strength of gut easily absorbed.

Park also spoke of Fehleisen's monograph on erysipelas, proving it to be a germ disease caused by a micrococcus. The recognition of the specific cocci of gonorrhea by Neisser in 1879 was mentioned, also the finding of organisms in osteomyelitis and the animal experiments on the pus thus obtained. The discovery of tubercle bacilli in the fistulous tracts from joints and the spine was confirmed, thus doing away with the term "scrofula," which had become an eyesore to the pathologist. The year 1884 marks the birth of many proper pathologic and bacteriologic terms and discontinuance of much of the old nomenclature which was often uncertain and traditional in origin. Rectal anesthesia was described by means of the conveyance of ether via a rectal tube. The ether bottle was placed in a water bath at 130 to 140°; "in 2 to 4 minutes the patient tastes ether in his mouth and in 10 to 12 minutes he is asleep."

There were remarks on surgery of the lungs and adnexae in which the work of Mosler, Brill and Kronlein was cited. In the field of abdominal surgery, the report covered Czerny's operation for resection of intractable peptic ulcer, Loreta's pyloroplasties, and gastrostomies for the relief of carcinomatous stricture. He quoted LeFort's statistics of 105 gastrostomies of which number 72.4 per cent died within 30 days after operation. Internal esophagotomy near the cardiac orifice had been reported by Sands of New York.

Park stated that there was improvement in the uncertainty and tediousness of Dupuytren's operation for the cure of an artificial anus and that he (Park) had performed one such operation. He said that 25 out of 37 cases reported were cured, a reported mortality of 31 per cent as against a mortality of 79 per cent by the Dupuytren method.

Attention was called to several operations performed by Billroth, and Park talked of the radical cure of hernia. He and his friends had gathered 360 operations for hernia, many strangulated, with an overall mortality of 4 per cent. He closed his remarks by giving some of his personal experiences, as follows: Successfully suturing one sciatic nerve and one radial nerve; a midline perineal opening into the bladder through which he extracted a stone with a dry weight of 1290 grains.

Dr. D. W. Graham reported an instance of goiter with respiratory obstruction. He had great difficulty inserting a tracheotomy tube as it was not long enough, and he consequently devised a new one with a flange at the skin surface.

1885

The Committee on Surgery consisted of Drs. C. Truesdale, Rock Island; T. M. McElvaine, Peoria, and M. Reese, Abington, with Dr. C. E. Webster of Chicago for orthopedic surgery. The report on surgery was given by Dr. W. A. Byrd who referred to recent books, especially the works of Dalton on "Typographical Anatomy of the Brain" and Treve's "Intestinal Obstruction." Eminent surgeons mentioned by him were Hugh Owen Thomas of Liverpool; Hamilton and his "Fractures plus Dislocations," and Kocher whose extirpation of the thyroid gland was coming into vogue in Europe. Dr. William T. Bull's work in advancement of abdominal surgery was mentioned, along with the work of Dr. Andrews of Chicago and the cholecystectomies of Dr. Charles T. Parkes. Dr. Byrd advocated stitching an opening in the gallbladder to the abdominal wall, and mentioned that Dr. J. M. Gaston of Atlanta, Georgia, had perfected a fistulous communication between the gallbladder and the intestine, thus allowing the bile to flow into the intestine so that it could perform its physiologic functions. Hip joint amputations and Devy's lever were considered dangerous because intestinal perforation and peritonitis occurred at times.



A paper on obstruction of the bowel was given by Dr. W. H. Veatch of Carthage. He listed 12 causes, and mentioned the fact that several American and English surgeons had adopted a policy of watchful expectancy using enemata, belladonna, warm olive oil and even mercury into the rectum.

1886

There were discussions on tubal pregnancy, litholapaxy (Dr. Edmund Andrews), and rabies and its treatment by the Pasteur method. The uncertainty and inefficiency of the "mad stone" and its application were exposed. Some of Pasteur's statements were seriously questioned.

1887

In opening the discussions of the meeting, Dr. E. P. Cook put these questions: "In what proportion of our cases of carcinoma of the stomach should we resort to resection"; "how to locate abscesses of the brain"; "how can we destroy bacteria without destroying the unfortunate one infected with them?"

Dr. D. A. K. Steele made the report for the Committee on Surgery. He said that progress in surgery was rapid and that an answer to Dr. Cook's queries would be like trying to give the history of the world in ten minutes. He spoke of Dr. Block of Quincy who, after many experimental pneumonectomies on animals, was so chagrined at the death of a female relative (his first human patient) upon whose lung he performed an apical resection that *after a medicolegal inquiry and criticism*, he committed suicide! Dr. Steele also spoke of some of the year's publications: Wyeth's "Textbook on Surgery"; the *Transactions of the American Surgical Association* which included Senn's article on "Surgery of the Pancreas," and Ashhurst's "International Encyclopedia of Surgery." He said that the *Annals of Surgery* maintained its supremacy as the only journal in the English language which was devoted primarily to surgery. He spoke of cocaine as a local anesthetic, and of surgical pathology as a real advance in surgical science, giving credit to such Chicago men as Fenger, Senn, Curtis, Belfield, Ochsner, Billings and others. He mentioned fungi, cocci, schizomycetes, actinomyces, and anthrax, and discussed osteomyelitis, pyemia, erysipelas, tuberculosis and "white thrombus" in blood vessels. Also included was discussion on antiseptics in surgery and the nature of pus. The cleansing of hands was stressed as the most vital point in the practice of antiseptic surgery, with the additional comment that all surgical instruments should be made of a single solid piece of metal. He reviewed the antiseptics of the day, and then quoted from Parkes's article in the *Annals of Surgery* on pneumonectomy and thoracoplasty with their indications also on neph-

rotomy, nephrectomy, wound healing, amputation and fractures. He related an instance of bone pegging for a fracture of the neck of the femur. An incision was made over the greater trochanter and an external plaster of paris dressing was used postoperatively. Three nights later the patient got out of bed to get a drink of water, fell on the cast and broke the bone transplant, thus opening the wound and spoiling the reduction as the everted foot returned. This was probably the first operation in Illinois by bone transplant, at least to correct fracture of the neck of the femur.

1888

The meeting was held at Rock Island and had no special report on surgery.

1889

The meeting was held in Jacksonville. Here appeared as delegates such men as Drs. Franklin H. Martin, Junius C. Hoag, D. W. Graham, Carl E. Black and Mary H. Thompson. Dr. N. S. Davis said, in responding to the speech of welcome and thinking of the 2nd annual meeting which he had attended in Jacksonville in 1852: "I did not start from Chicago last night and be here this morning to breakfast. I had a journey by stage of one day, and a good part of a night, then a ride on the Illinois River, then another piece of a ride on the construction train of a railroad on top of a load of ties, part way to Jacksonville, and I think we came into the city on a stage coach. That made the journey which was illustrative of the differences in the times, that a few years have made." Dr. Davis spoke also of a trip to New York by way of stage coaches in 1846 to lay the foundation of the National Medical Association and said: "It took me as long, by the then best means to travel, to go from Binghamton (N.Y.) to New York City to attend that as it would take now to go from Chicago to San Francisco and it was a great deal more tiresome."

Dr. John H. Hollister of Chicago, Chairman of the new Biographical Committee, reported that this committee "should preserve the material from year to year which shall in the future biography correctly represent the history of our medical men. . . . Your committee would respectively suggest that such a biographical history may be published, very appropriately at the end of the century, ten years hence."

The report on surgery was given by Dr. L. L. McArthur of Chicago. His first remarks were on the Thiersch skin graft using a heavy razor blade and surgical dressings. He abhorred iodoform. He continued with a discussion of the surgical procedures of suprapubic cystotomy, joint surgery (arthrectomy had come into use) and hydrocele. Of the literature, he spoke admiringly of Senn's work on intestinal surgery.

Dr. J. S. Miller of Peoria gave a supplementary report on surgery, cover-

ing bacteriology and its great value to antiseptic surgery; drainage tubes and their harm especially in amputations; the Esmarch bandage, and local anesthesia from either cold or cocaine.

Dr. William Barrett of Onarga spoke on anthrax. Dr. A. E. Hoadley of Chicago talked about tubercular joint disease, advising operation as soon as possible. In the discussion of the surgical papers, Dr. A. E. Palmer of Morris commended antiseptic surgery and stated that all instruments should be rendered as aseptic as possible before use and should have metal handles, as advised by Dr. Andrews.

1890

The meeting this year was held in Chicago.<sup>5</sup> Dr. John B. Murphy was listed as a delegate from Cook County Hospital, and Dr. S. C. Plummer as delegate from Rock Island. Dr. Norman Bridge gave the Address of Welcome.

Chicago at this time had approximately 2000 hospital beds, many of which were used for surgical teaching. It was announced at this meeting that the Newberry Library had plans for a Medical Library Department. There were no laboratories worthy of the name for planned medical research as yet.

Dr. F. C. Schaefer, Professor of Anatomy of Chicago Medical College and Surgeon to Wesley Hospital, was Chairman of the Committee on Surgery. He announced the following topics for discussion, allowing five minutes for each: (1) Malignant diseases of the rectum, in which Drs. David Graham, J. E. Owens and Christian Fenger took part; (2) senile prostatic enlargement, discussed by Dr. Edmund Andrews and others; (3) renal calculus, discussed by Drs. Danforth and Jacob Frank; (4) penetrating wounds of the abdomen (including injuries of the ureter as presented by Dr. R. N. Isham); (5) perityphlitis (appendicitis) discussed by Drs. E. W. Lee, Frank Andrews and J. B. Murphy.

Dr. Schaefer stated that antiseptic surgery was an established fact, and spoke of "sterilized lint" for surgical dressings, this being subjected to a temperature of 248°F. He quoted Senn's article on "Treatment of Bone Cavities" with decalcified bone as a substitute for Schede's moist blood clot method (later known as aseptic blood clot). Senn used ox tibia, decalcified in hydrochloric acid. The acid was washed out and the chips were placed in mercuric chloride solution 1:500, sealed in bottles. These chips were

<sup>5</sup> Dr. C. T. Parkes gave a luncheon on Wednesday of the meeting at Kinsley's Restaurant. Your scribe well remembers this restaurant, its excellent food, and its well patronized table d'hôte dinner for \$1.00. There was also a theater party at McVickers Theater for delegates and members.



used to fill bone cavities after the sequestrum was properly removed, the periosteum being closed over the chips. Experiments were reported by Drs. Hopkins and Penrose using bone dowels to pin fractures together; these were said to hold for five or six weeks and then became absorbed.

For abdominal surgery, Schaefer referred to the meeting of the British Medical Association in August 1889 where Treves discussed typhlitis, a local form of peritonitis; he advised an incision after the first week of the attack as sufficient for most cases as an encysted abscess was usually found and there was no danger of opening the peritoneal cavity. This was contrary to Murphy's hard fought contention, and it was the subject of discussion before the American Surgical Association. Treves described the technic of his operation and referred to the article by Murphy and Lee, saying that perityphlitis vermicularis always belonged to the province of surgery and that two points were proven: (1) perityphlitis is always accompanied by a pus cavity, and (2) with the present plan of non-interference, the patient was more liable to a return of the disease. Their statistics indicated that the mortality rate was greatly reduced by early operation. Murphy operated upon 12 patients with 10 recoveries. He claimed that the appendix was uncovered by peritoneum one-eighth of its circumference (contradicting Treves). "As pus within the base of the appendix accumulates, it meets the least resistance at the uncovered point, and therefore it frequently ruptures through this point of least resistance into the pelvic cellular tissue, making the perityphlitic abscess extra-peritoneal."

Herniotomy and digital divulsion of the pylorus for cicatricial stenosis (Loreta's operation) were discussed, and a new method was described of gastrostomy through the thoracic wall through the eighth intercostal space.

Gastroenterostomy was the next subject. Four such operations performed by Selenkow of Russia were discussed, these making a total of 35 known cases up to that time. The operation was considered useful in prolonging life in carcinoma of the stomach and in incurable pyloric stenosis. The need to determine exactly the fossa of Treitz (*plica duodenojejunalis*) to identify the beginning jejunum was stressed.

For perforating wounds of the abdomen, Senn's method of diagnosis for ruptured intestine by inflation with hydrogen gas administered via the rectum was presented; the method was not received favorably. Discussions on nephrolithotomy and malignant disease of the rectum followed. At this time some surgeons were excising the rectum and were discontinuing the use of Kraske's posterior operation. The advantages of colostomy were advanced, but it was admitted that the operative mortality of these rectal and colon operations was very high.

1891

Dr. John H. Hollister, in making the report of the Committee on Biography, said: "But in the after history of Medicine in Illinois, we are confident that a position most honorable and most enduring will be accorded to the Founders of its Medical Institutions and to the active membership of the State Society during the period of its first fifty years." May this history bear out that hope.

The Address in Surgery was given by Dr. John E. Owens who discussed suprapubic cystotomy and reported a series of ununited fractures treated by sewing with silver wire. Dr. Christian Fenger read a paper on "Elephantiasis of the Scrotum" with remarks on operative treatment. The mass of scrotum in this instance weighed 22 pounds and extended down to the knees. Dr. Fenger devoted two weeks to antiseptic treatment before the operation. Dr. Edmund Andrews read a paper on an improved method of performing Rose's operation for tic douloureux, which was ably discussed by Dr. L. L. McArthur.

1892

An address was given by Dr. J. H. Etheridge of Chicago, Chairman of the Surgical Committee, on "The Technique and After Management of Laparotomies." He reported that he had performed 70 laparotomies at the Presbyterian Hospital in the preceding seven months without sepsis in a single case. Five patients died, 3 of shock and 2 of intestinal obstruction. He used overnight preparation: soap and water scrubbing; bichloride of mercury (1:3000) from the shoulders to the knees, and then the surfaces were bathed with alcohol and ether. Finally an iodoform pad, covering the whole abdomen, was supported by a binder overnight, to be removed at operation the next day. The needles, instruments and ligatures used were boiled for one-half hour. Hands were scrubbed with soap and water and then immersed in bichloride of mercury solution. Visitors wore aseptic gowns "or should witness at such a distance from the operator, internes and nurses, that they, in working and turning about, will not permit their hands in any way to touch the visitors' clothes." He also issued the edict: "When in doubt, drain." He employed Hagedorn needles, silk through-and-through sutures, and for shock, hot water bottles.

During this meeting there were also presented short papers on "Hodgen's Splint for Fracture of the Femur" by Dr. William J. Chenoweth of Decatur; "Movable Kidney with Hydronephrosis" by Dr. D. W. Graham; "Inguinal Hernia" by Dr. William M. Harsha, and "Empyema" by Dr. D. A. K. Steele.

1893

Dr. Hall of Kewanee read a paper on "Treatment of Burns," and Dr. F. C. Schaefer of Chicago presented one on "Perityphlitis." He stated that McBurney by then called perityphlitis and all related lesions "appendicitis." While it was agreed that the old terms would be dropped, he suggested the term "pericaecitis." Fracture of the patella was discussed by Dr. W. P. Verity of Chicago, who said that Rhea Barton in 1843 had done the first wiring of the bone. He noted the great increase in operations upon this fracture since Lister in 1877.

1894

Dr. O. B. Will of Peoria presided, and in his address he spoke of vivisection, laboratory research and the action of the Society for Prevention of Cruelty to Animals. He said: "Modern surgery virtually owes its existence to the work of the vivisector, not only in the art but in the science."

Dr. Victor C. Vaughan of the University of Michigan read a paper on "The Nucleins and Nuclein Therapy," citing his experiments on guinea pigs and other animals. Dr. Edmund Andrews described "A New Method of Valvular Gastrostomy with a Mucous Membrane Lining." Other papers were: "Physiology and Pathology of Surgical Shock" by Dr. Lester Curtis of Chicago; "Differential Diagnosis and Elements of Prognosis of Surgical Shock" by Dr. William Barnes of Decatur; "What to Expect from Drugs in the Treatment of Surgical Shock" by Dr. William E. Quine of Chicago; "Treatment of Fracture of the Neck of the Femur" by Dr. C. C. Hunt of Dixon, and "Resection of the Shoulder" (for gunshot wounds) by Dr. W. E. Guthrie.

1895

Dr. Duncan Eve of Nashville gave the Address in Surgery, crediting Senn and Murphy for many of the recent advances in surgery. Dr. E. Wyllys Andrews presented his "Imbrication Operation for the Radical Cure of Hernia." This was also called the lap joint operation and included both inguinal and femoral hernias. The technic was discussed favorably by Drs. Graham and McArthur. The use of this operation rapidly spread all over Europe.

Dr. Edmund Andrews read a paper on "The Disasters Following the Whitehead Operation and the So-called 'American Operation' for Piles." Dr. Christian Fenger gave the last paper of the session on "Plastic Operations on the Hand to Remedy Deformities Caused by Injuries and Burns."

1896

Dr. James A. Prince of Springfield read a short report on "Lateral Anastomosis for Obstruction with the Murphy Button Introduced Through



the Vagina." When a patient so operated developed bowel obstruction ten days after vaginal hysterectomy with clamps, he put his hand up into the abdominal cavity via the vagina, got hold of the distended and obstructed loop of bowel which he pulled down into the vagina, and there put in a Murphy button. Gas and feces were passed on the second day through the rectum. Later a fecal fistula developed per vaginam but this slowly healed and closed. The Murphy button was passed by rectum and the patient recovered.

"Iodoform Injection Treatment of Hip Joint Disease" was presented by Dr. Alexander Hugh Ferguson of Chicago. He recommended from 1 to 20 injections, and disagreed with the use of the Thomas splint immobilization.

"Cholelithiasis, a Plea for Operative Treatment" was the next paper, read by Dr. E. Mammen of Bloomington. He quoted Senn as saying: "The removal of calculi from the gallbladder can now be accomplished with very little danger to life. The simple fact that a patient is suffering from gall stones does not furnish a positive indication for surgical interference. The physician's and nature's resources should be given a chance, and the surgeon's services should be limited to those cases in which positive indications for treatment present themselves. The surgeon who recorded the first successful case of cholecystectomy has since become the victim of gall stones, but instead of calling upon one of his colleagues to open the gallbladder and remove the stones, he made a pilgrimage to Carlsbad and was promptly relieved." Whether relief was permanent or not was not stated! Dr. Mammen outlined the indications for cholecystectomy, and reported a cholecystoduodenostomy using a Murphy button upon finding a stone lodged in the common duct. The button passed on the 17th day. In the discussion Dr. Ferguson said: "Cholelithiasis has become a surgical subject. No medication does it any good." He spoke of the dangers of the use of the Murphy button and of the possibility of removing a common duct stone through the bowel and ampulla of Vater.

"Metatarsalgia" was presented by Dr. A. E. Halstead of Chicago. He advised resection of the nerves in chronic cases, recording three of his own. This operation has recently been reported as "new."

"Surgery of the Gasserian Ganglion with Demonstrations" was given by Dr. J. B. Murphy of Chicago who advised an intracranial operation.

1897

An address was given by Dr. Weller Van Hook of Chicago on "The Present Relation of Surgery to Internal Medicine." He pointed out that anatomy gave a dignified basis for surgery. He also spoke of the recent advance of anesthesia and of the knowledge gained from cellular pathol-

ogy. He mentioned that appendicitis was still a bone of contention between medicine and surgery, as was also intestinal obstruction and cholelithiasis. Hernia had now become a purely surgical problem. He mentioned the value of spinal puncture and finally of x-rays—their first appearance in our reports. The value of Marmorek's serum for streptococcus infection was considered. In a later discussion Dr. James B. Herrick spoke of the value of venesection in some instances of arteriosclerosis and the overloaded heart. Dr. Robert H. Babcock discussed coronary sclerosis.

Gastrostomy after esophageal burns by lye was the subject of a paper by Dr. J. A. Haughman of Neoga, who said the operation had been performed by Sedillot 48 years before but that the first successful case was performed by Dr. Sidney Jones of England in 1874. Haughman had performed a von Hacker gastrostomy and opened the stomach by a cautery knife three days after sewing the stomach wall to the peritoneum.

Dr. Jacob Frank followed with a paper on "Intestinal Anastomosis," using Senn's decalcified bone plates for anastomosis. These bone collars had six needle hole perforations at the apex of the shoulder. He described a successful gastroenterostomy with this collar performed by Dr. McCandless of St. Louis on March 16, 1897. The collar had been carved out of a sound compact bone from the hind foot of a 4-year old ox and was decalcified in 10 per cent hydrochloric acid. Frank noted that whittled potatoes and carrots had been used in past years, and he reiterated the fact that a French surgeon had brought out the idea of pressure necrosis, later used to advantage in the Murphy button technic.

Dr. John E. Owens of Chicago spoke of the use of toxins in the treatment of sarcoma, particularly inoperable cases, and referred to the serum made and used by Dr. William B. Coley of New York, first employed in April, 1891. He cited a case reputedly so cured. Dr. A. E. Halstead said that he had seen the microscopic sections of that case and that it was a giant cell sarcoma. Dr. Halstead had treated three patients thus and all died within three or four months, and he said rightly that "the improvement to be noted with the treatment of sarcoma with toxins is largely due to error in the diagnosis."

Dr. J. B. Murphy read a paper "On End to End Suture of Large Vessels," in which he said that arteries could be united and the blood current continued through them (in the dog). He overlapped and then sutured the arterial ends. The greatest difficulty in getting a good result was thrombosis. He had sutured both the femoral and axillary arteries, but not the aorta.

Dr. A. E. Halstead reported on "Nonmalignant Strictures of the Rectum," employing linear proctotomy followed by dilatation and/or colostomy. Dr. Carl E. Black reported on "Infiltration Anesthesia," using

Schleich's solution. Dr. Fenton B. Turck spoke on the "Diagnosis of Surgical Diseases of the Stomach," and he described the gyromele, a flexible cable or spiral closely covered with soft rubber with a sponge on the end to be revolved inside the stomach by means of a spring. "The revolution of the sponge and cable within the stomach are readily palpable upon the abdominal wall." Turck had shown this before the New York Academy of Medicine in May, 1895. He finally mentioned the use of x-ray as valuable in sounding the stomach with this instrument. (This may have been the inception of fluoroscopic examination of the stomach. It occurred in Illinois.)

1898

The surgical program included a general discussion of the Dixon decision.

Dr. Robert H. Babcock read a paper on "Diagnosis and Differential Diagnosis of Pulmonary Abscess and Gangrene—Surgical Treatment," which was discussed by Dr. L. L. McArthur. Nothing was said about x-ray examination of the chest. Dr. A. E. Halstead read a paper on "Treatment of Acute Abscess and Gangrene of the Lungs," advising rib resection and pneumotomy.

There followed a paper by Dr. Jacob Frank on "Pathological Histology of Intestinal Union after the use of the Frank Bone Coupler."

1899

Dr. E. W. Andrews read another paper on his imbrication operation for radical cure of hernia, a subject he had presented at the 1895 meeting. He stated that he now had performed 309 such operations, and McArthur had done 45, Eagelson 27 and Cole 24. Dr. Alexander H. Ferguson presented a paper on "Adipose Tissue, an Etiologic Factor in Hernia"; he said fatty hernia was known to Morgagni in 1745.

Drs. Andrews and D. N. Eisendrath gave a joint paper on "The Surgical Treatment of Hemorrhage from Gastric Ulcers" with reports of two cases and with pertinent animal experiments. They presented an adequate review of the literature, covering the sites of hemorrhage and the methods of operating, and crediting Mikulicz with the first case treated in 1887.

Two papers on goiter were presented, the first by Dr. A. I. Bouffleur and the second by Dr. Karl Doepfner of Chicago (Senn's assistant). Both essayists advised partial thyroidectomy after an attempt at prolonged rest cure, using only local anesthesia in such cases, never chloroform.

1900

In the transactions of this meeting there appears a report of the 4th Illinois Volunteer Infantry in the war with Spain. Illinois mobilized 10,000



men. Dr. Senn was made Surgeon General of Illinois and established a graduate school for military surgeons at Camp Tanner. The report of the 4th Infantry showed that they had 1717 sick entries during their service.

Dr. Allen A. Wesley of Chicago gave a paper on "The Spanish American War as Seen by the Military Surgeon" in which he told of mismanagement and lack of supplies, and stated that there was no surgery there to do.

Dr. E. M. Sutton of Peoria, in making a report on appendicitis, advised perineal operations in the male and vaginal drainage of abscesses developing in the female.

Dr. M. L. Harris of Chicago gave a paper on "The Treatment of the Sac in Very Large Inguinal Herniae."

A 60th birthday party was held that year for Dr. Christian Fenger of Chicago.

### *Chicago Medical Journal*

As a reflection of the times, we may insert briefly topics given in the *Chicago Medical Journal*, edited by Drs. N. S. Davis and W. H. Byford of Chicago.

*Volume 1, 1858:* A case of ankylosis of both elbow joints in extension was treated by Dr. J. W. Freer by means of forced rupture of the adhesions under chloroform anesthesia, the forearm being bent over the doctor's knee. Apparently this resulted in dislocation of both elbow joints, an intercondylar fracture of the humerus and a left ulnar paralysis. The patient was later able to feed himself.

Dr. Daniel Brainard reported 13 cases of ununited fracture treated by drilling; also a resection of the elbow joint in which he had removed 3 inches of the humerus in 1857, using chloroform anesthesia. He also had resected a knee joint under chloroform, sawing off the condyles of the femur; the wound became infected but healed in four months.

Strangulated hernia was recorded by Dr. William Dickins. Dr. David Prince reported on treatment of empyema by aspiration and injection of tincture of iodine. Hydrocephalus was treated likewise by injections of iodine.

*Volume 2, 1859:* In this issue Dr. Brainard reported the removal of a foreign body, in situ three months, from the air passage of a 2-year old child via a tracheotomy tube, under chloroform anesthesia. He also described ankylosis of the knee joint treated by fracturing the femur, breaking the bone easily after boring several holes in it.

This volume contains an advertisement of Dr. Edwin Powell of Chicago offering private instruction in anatomy, surgery, etc., at the Marine and the Mercy Hospitals, to include study of pathologic specimens, microscopic demonstrations, dressings for fractures, etc. The terms were \$35.00 paid in advance.

The volume also tells of the original discovery of chloroform by Simpson of Edinburgh, which he considered to be of greater value than ether. An instance of hip joint amputation was reported, the patient dying within 12 hours; only six cases were known up to that time. Instances of tetanus after trauma were described, and woorara was recommended as a remedy for it. Vella of Paris had used this at the start of the century, and later it had been employed to counteract strychnine poisoning.

*Chicago Medical Journal & Examiner*

*Volume 34, 1877:* By this time the publication was called the *Chicago Medical Journal & Examiner*. In this issue Dr. H. A. Johnson of the Chicago Medical College presented a paper on "Thyrotomy for Tumors" with a report of four cases. He gave a review of 63 cases in the literature, and said his four cases were the only ones performed in Illinois.

There was a discussion of lithotomy, in which it was said that there was a smaller number performed in the Lake States than abroad, and with a higher mortality.

In a discussion on transfusion, which had been done but a few times in the Lake States, Drs. Freer and Andrews reported its use in 8 or 10 cases of hemorrhage. Freer's cases gave promise of recovery but later died with symptoms of embolism. None of the cases finally recovered. Dr. F. C. Hotz reported a transfusion with lamb's blood, and Dr. Wild eight cases of phthisis and anemia likewise treated with lamb's blood; one was temporarily improved and one died as a result of the operation. Dr. Freer spoke of his experiments on dogs from which he had concluded that the transfusion of defibrinated blood was the most successful plan. Dr. John Ashhurst was said to agree with him.

In this volume the percentage mortality rates are given for similar surgical procedures in the Lake States areas and abroad:

	<i>Lake States</i>	<i>Abroad</i>
Shoulder amputations . . . . .	30	39
Arm amputations, primary . . . . .	11	35
Thigh amputations . . . . .	40	61
Hip amputations . . . . .	48	32
All thigh amputations . . . . .	24	62
Herniotomy . . . . .	24	49
Lithotomy . . . . .	38	19
Ovariectomy . . . . .	28	29
Gastrostomy . . . . .	none	58
Colostomy . . . . .	none	44
Knee cartilage . . . . .	none	20

This was a valuable collection of data for that time since the Chicago fire had destroyed many older records.

*Volume 36, 1878:* Dr. Nicholas Senn published an extensive article in

which he decried the use of traction in the treatment of inflamed joints, mainly on account of the unyielding character of the joint ligaments. He doubted that even a heavy weight used for traction would secure any separation of articular surfaces or influence a copious effusion. "The weight, however, does neutralize the reflex muscular contractions but does not diminish intra-articular pressure. The muscular contraction causes pain in the joints and wear on the articular surfaces followed by spontaneous dislocation." This was a well written paper and an excellent examination of the rationale of the orthodox treatment from the pathologic standpoint. It had great influence on the treatment of highly inflamed and especially tuberculous joints. Dr. Senn's conclusions were: "(1) A weight applied over a pulley is the best method of making permanent extension (traction); (2) extension should always be first made in line of the deformity; (3) extension acts as an antiphlogistic and orthopedic agent removing muscular and ligamentous contractions; (4) permanent extension is most useful in joint affections when cartilage and bone ends are diseased; (5) as an ordinary orthopedic measure, extension should always supersede brisement forcé as long as tenderness exists."

This volume also contained abstracts from foreign journals and some foreign correspondence. The first use of neurectasy on the brachial plexus was credited to Professor Nussbaum on June 22, 1872, and subsequent cases from England, France and Philadelphia were cited. The first operation of this kind (nerve stretching) in the United States was credited to Dr. Edmund Andrews of Illinois on May 15, 1876. The subcutaneous use of carbolic acid diluted with glycerine in the treatment of erysipelas was reported by Dr. James S. Whitmire of Metamora, Illinois.

Professor Brown-Sequard of France gave three lectures in Chicago on February 21, 22 and 23, 1878. These concerned paralysis and convulsions resulting from disease at the base of the brain.

An editorial asked: "Does Chicago Need Two Medical Societies?" Before the fire of 1871 there had been only one Chicago Medical Society, but on account of the distance to meetings held on the West Side, the Chicago Society of Physicians and Surgeons was founded in 1877.

An abstract was given of an article by Professor Letievant of France on the practical aspects of Lister's antiseptics in surgery; 1500 operations at the Hotel Dieu were recorded without an infection!

Dr. Wallace Blanchard described "A New Apparatus for Potts' Disease of the Cervical Vertebrae" using a leather extension applied to a plaster of paris corset with a head band to hold the neck and head motionless.

#### SPECIAL SURGICAL SOCIETIES

*American Surgical Association.* The year 1880 was a most important one in surgery in Illinois, because of the formation that year of the Ameri-



can Surgical Association which was destined soon to dominate the field of surgery throughout the country. Its members were selected from the leading surgeons and surgical teachers of the different states of the Union. Its first meeting was held on June 1, 1880 with Dr. Samuel Gross of Philadelphia as President. Illinois was well represented: Dr. Moses Gunn of Chicago was a member of the first Council and became Vice-President in 1882; Drs. William Andrew Byrd (Quincy) and Christian Fenger, Moses Gunn, R. N. Isham, John E. Owens and Charles T. Parkes all of Chicago, as well as Dr. David Prince of Jacksonville were primary members. Dr. Nicholas Senn, then living in Milwaukee but later in Chicago, became Vice-President in 1887 and President in 1892. He was also in the original group of primary members. Only one additional member was admitted to this Association from Illinois before 1900 and that was Dr. Truman W. Miller of Chicago, who was elected to membership in 1898. It seems fitting at this time to list the papers of these outstanding Illinois surgeons in this national parent surgical organization:

In Volume I (1881-83), Dr. Moses Gunn read a paper on "Treatment of Fractures of the Skull, Recent and Chronic, with Depression." Dr. David Prince gave a "Description of a Rectal Obturator and Report on its Use." Dr. Nicholas Senn wrote on "Fractures of the Neck of the Femur"; this occupied 108 pages in this first volume and included excellent reports on animal experiments and very pertinent discussions by other members, as well as a description of the arterial blood supply to the head of the bone via arterioles entering the fovea centralis (so recently rediscovered?). Senn also had an article on "A Case of Bony Union After Impacted Intracapsular Fracture of the Neck of the Femur," in the discussion of which Gunn specifically mentioned the blood supply to the head of the bone via the round ligament.

In 1884 Dr. Byrd gave a paper on "Trephining for Insanity, Consequent upon a Depressed Fracture of the Skull." Drs. Christian Fenger and E. W. Lee (of Cook County Hospital) described "An Opening and Drainage of Abscess Cavities in the Brain" and Dr. Gunn talked about "The Philosophy of Manipulation in the Reduction of Hip and Shoulder Dislocations."

In 1885 Dr. Charles T. Parkes reported a case of cholecystotomy, and Dr. Prince "A Device for Atmospheric Purification," with Senn recording "An Experimental and Clinical Study of Air Embolism."

In 1886 Dr. Gunn's Presidential Address was entitled "Union of Nerves of Different Function Considered in its Pathological and Surgical Relations." At this meeting Dr. Parkes presented "Two Cases of Cholecystotomy," and Senn spoke on "The Surgery of the Pancreas."

In 1887 Dr. Fenger described a new kolpoplastic operation for defect of the vagina, and Dr. Prince spoke on aseptic and antiseptic management of wounds.

In 1888 Dr. Prince talked on "Pelvic and Abdominal Drainage."

By 1890 Dr. Senn was registered from Chicago, from whence he henceforth wielded his surgical influence. In 1891 he read a paper on "Treatment of Tuberculosis of Bones and Joints by Parenchymatous and Intra-Articular Injections."

Dr. Senn was President of the Association in 1892, and in 1893 he gave a paper on "A New Method of Direct Fixation of the Fragments in Compound and Ununited Fractures." He spoke of the use of ivory and bone ferrules; Dr. Parkes did not agree with his recommendations.

The following year, 1894, Dr. Fenger had a paper on "Surgery of the Ureter," in 1895 on "Cases of Hernia of the Bladder Met with During Operations for Inguinal and Femoral Hernia," and in 1896 on "Retention from Displacement, Bending and Valve Formation (Oblique Insertion) in the Biliary Tract."

In 1898 Dr. Senn read a paper on "The Etiology and Classification of Cystitis."

In 1899 Dr. Owens read a paper on "Tubercular Knee Disease," and Dr. Senn on "First Aid Package in Military Surgery."

The Illinois members, in addition to their major contributions, took part in many discussions of the program papers.

*Chicago Surgical Society.* The Chicago Surgical Society was founded in 1900 and has maintained a lively existence ever since. The charter members were:

Walter W. Allport  
E. Wyllys Andrews  
Carl Beck  
Arthur D. Bevan  
Albert I. Bouffleur  
Frederic S. Coolidge  
Thomas A. Davis  
Christian Fenger

Bayard Holmes  
Edward H. Lee  
Lewis L. McArthur  
Ernest J. Mellish  
William E. Morgan  
John B. Murphy  
Albert J. Ochsner  
John E. Owens

Alexander H. Ferguson  
Jacob Frank  
Albert E. Halstead  
Malcolm L. Harris  
Samuel C. Plummer, Jr.  
Nicholas Senn  
Daniel A. K. Steele  
Weller Van Hook

#### CIVIL WAR SURGERY

In 1863, there existed a very rigid examination of doctors in Illinois for military service in the Civil War, performed by a five-man board headed by Dr. N. S. Davis of Chicago; later this board was increased to eight and Dr. Brainard became a member. Up to January 1863, they had examined 595 candidates; 259 were recommended for surgical work and 266 for assistant surgeons; 70 were rejected.

This board or committee reported on the location and results of gunshot wounds in 734 cases. These were divided into trunk 164, thorax 36, abdomen 10, head 50, thigh 109, etc. Some of the head wounds were trepanned but as a rule, operation was considered useless in military surgery. Of the

36 gunshot wounds of the thorax, including the lungs, 12 recovered. All abdominal wounds were fatal. They stated: "It may be a question worthy of serious thought, in view of the hopelessness of our present practice, whether we ought not to cut boldly into the abdominal cavity, wash out the filth and, bringing the wounded intestine to the surface, endeavor to produce an artificial anus." Certainly they were bold thinkers.

Of the 109 wounds of the thigh, 90 were flesh wounds and 19 compound fractures. Of the 90 flesh wounds, 76 recovered, 13 died and 11 were doubtful. Of the 19 open fractures, 5 were amputated at the upper third of the thigh, 1 recovered and 14 died. Of the three mid-thigh amputations, 2 recovered and 1 died. One lower third amputation recovered. Nine were treated without operative interference by using splints, position and such incisions as were needed for drainage; 3 recovered, 6 died. From the report "it would seem that shots through the cancellous tissue, the superior one-fifth of the femur, are much less dangerous than those in the compact bone of the shaft below." This was due to shattering caused by the soft Minnie bullets (trench bombs) on the "ivory" bone.

Twenty-six gunshot wounds of the knee were discussed: 14 were flesh wounds; 12 recovered and 2 were uncertain in outcome. There were 12 compound fractures of which 5 recovered, 4 died and 3 were doubtful. There were 10 gunshot fractures treated by amputation of the lower one-third of the thigh; 6 recovered, 3 died and 1 remained doubtful. One resected knee recovered and one not operated upon died.

Further reports "observed a considerable number of cases of gunshot fractures of the knee at the battle of Shiloh, very injudiciously treated as ordinary fractures without any operation . . . but we never knew one to recover. . . . Let any young surgeon who is reluctant to sacrifice the limb or joint in these cases take the trouble to dissect two or three of them, and he will see at once why they all die, unless they are amputated or resected. The bullet disorganizes the interior of the joint in a most surprising manner, filling it with 500 fragments of bone and cartilage and putting it in a condition from which no human frame can recover without operative help."

In the discussion of these war surgical operations it was stated that the operations were for the most part executed by educated and skillful men, so that there was little occasion for criticism and the results compared well with those obtained in other armies.

No hip joint amputations were performed. In 88 amputations of all parts of the body, 13 died and 67 recovered, 8 were doubtful. In 17 joint resections, 12 recovered, 4 died and 1 was doubtful. There were 8 cases of ligation of large arteries and 1 was of the subclavian; 6 recovered, 2 died.

The practical questions which arose were: (1) What cases require amputation? (2) What cases require resection? (3) What cases should be treated



without operative interference, and (4) what variations from accepted rules must be made in view of special military exigencies?

Our records were compared to those of Esmarch's results in the Schleswig-Holstein campaign (19 resections with 12 recoveries) and Guthrie's series of 44 amputations in the British War with Napoleon, of which number 17 died.

In the report there is a long discussion of the results obtained by eastern surgeons in the Potomac Campaign plus a comparison with British statistics (which are the most extensive in the world) plus Stromeyer's idea of resection of the ragged end of a femur rather than a thigh amputation. This method was used in the Battle of Toulouse in Europe on 43 of the most favorable cases with a mortality of 60 per cent as compared with our army's mortality of 55 per cent for all thigh amputations.

Four conclusions were reached: (1) A large proportion of gunshot wound comminuted fractures of the femur die within five days under any or all treatments; there is no perfect reaction. (2) Shots through the spongy tissues of the trochanter and neck of the femur are less fatal, since there is not so much splintering of ivory-like bone of the cortex and damage to the soft parts. (3) Amputation above the middle of the femur should be performed only in desperate circumstances. (4) If one can amputate below the middle of the thigh, do it promptly and thereby save 75 per cent of all patients.

It was also recorded that 10 to 15 per cent of deaths in military surgery were due to erysipelas, diffusive phlebitis, pyemia and hospital gangrene. It was advised that the patients be kept dispersed in open tents in the field, never crowded together. "Men will lie in snow, on wet ground, or under open sheds, and do well on bacon and hard bread; but in close hospitals they will die though they have all the luxuries of the world around them."

The principal military hospitals in Illinois at that time were located at Mound City, Cairo, Quincy, Alton, Camp Butler and Camp Douglas, Chicago. Most of the rebel sick (captured) were held at Camps Butler and Douglas. These men were usually considered inferior to northern men in their recuperative powers. At Camp Douglas the mortality was twice that of our own Union soldiers, although they were given the utmost care and attention.

#### COOK COUNTY HOSPITAL <sup>6</sup>

A brief supplementary résumé of the history of Cook County Hospital may well be added to this history of surgery in Illinois, considering that many of the great surgeons involved in the progress of the years 1850 to 1900 worked in the hospital as staff members or interns. The

<sup>6</sup> The writer has quoted freely from the *Bulletin of the American College of Surgeons* 35:255, September 1950.

history of Cook County Hospital dates back to 1854-1855 when the city established a cholera hospital at 18th and Arnold Streets (Wentworth Avenue). This later became the site of the County Hospital. In 1850 Dr. Amerman and Dr. J. P. Ross leased it for use as a public hospital and secured a contract for the care of the sick poor of the county. The Board members included Drs. Daniel Brainard, DeLaskie Miller, S. C. Blake and George Schloetger. Clinical instruction was given eight months of the year, mostly to students from Rush Medical College. The hospital was taken over by the government as a military hospital during the Civil War and became a center for eye and ear patients. Drs. Amerman and Ross again became interested in the reestablishment of the hospital.

After the Civil War, Dr. Amerman got himself elected supervisor in 1866 and then reorganized the hospital for the care of the indigent poor and for clinical instruction of students. He was later succeeded by Dr. Ross.

In 1876 there were two central pavilions, a boiler house, a mortuary and a kitchen unit on the present site, namely West Polk and Wood Streets. In 1876 there were six interns and in 1882, twelve.

Among the list of interns were many men who became internationally famous then or later from Illinois:

Nicholas Senn  
William Fox  
William E. Quine  
John B. Murphy  
Lewis L. McArthur  
Byron C. Meacher  
A. E. Halstead

Joseph B. DeLee  
James B. Herrick  
Ludvig Hektoen  
Bertram W. Sippy  
George H. Weaver  
Arthur Edwards  
Robert Preble

Edwin R. LeCount  
Henry T. Ricketts  
Thomas A. Davis  
Charles Davison  
H. Gideon Wells  
N. W. Jones

#### BIOGRAPHIES

*Dr. Daniel Brainard* was a remarkable man who, perhaps to a greater extent than any of his contemporaries in Chicago, achieved a national reputation. He was born May 15, 1812, in the town of Western, Oneida County, New York. Having chosen the profession of medicine, he entered the office of Dr. Harold H. Pope, a distinguished physician and surgeon of Rome, New York. He pursued his studies later in Whitesboro and New York City and obtained his degree from Jefferson College, Philadelphia, in 1834. He spent two years at Whitesboro, New York, teaching anatomy and studying Latin and French. His advent in Chicago is described by his friend, Mr. J. D. Caton, as follows:

"About the first of September, 1835, Dr. Brainard rode up to my office, wearing pretty seedy clothes and mounted on a little Indian pony. He reported that he was nearly out of funds, and asked my advice as to the propriety of commencing practice here. We had been professional students together in Rome, N.Y., when he was there in the office of Dr. Pope. I

knew him to have been an ambitious and studious young man of great firmness and ability, and did not doubt that the three years since I had seen him had been profitably spent in acquiring a knowledge of his profession. I advised him to go to the Indian camp, where the Pottawatomies were gathered, preparatory to starting for their new location west of the Mississippi River, sell his pony, take a desk or rather a little table in my office, and put his shingle by the side of the door, promising to aid him . . . in building up a business." (Quoted by Hyde, *Ill. & Ind. M. & S. Journal* 2: 26, 1845)

Dr. Brainard was a dominating figure in surgery in Illinois until his death in 1866. He was Vice-President of the American Medical Association in 1850, in which year he helped to organize the Chicago Medical Society and to reorganize the Illinois State Medical Society. In 1854 he was awarded a prize by the American Medical Association for a classical essay on "New Method of Treating Ununited Fracture and Certain Deformities of the Osseous System." He was editor of the *Northwestern Medical and Surgical Journal*. He was an enthusiastic and skillful teacher, a gifted public speaker, an able organizer and an accurate original investigator.

Dr. Moses Gunn arrived at Rush Medical College in 1867. He had been Professor of Surgery at the University of Michigan. Bridge and Rhodes say of him: "He was thoroughly equipped as a surgeon, quick and accurate in diagnosis, rarely made a mistake and was a rapid and elegant operator. He was a fine lecturer, fluent, wordy enough and to the point and spoke in a language always correct. He was tall and erect, a striking figure in the amphitheater as he was everywhere. He was thought by some to be guilty of a marked fastidiousness—as he was given to the most tasteful if not striking costumes—especially on horseback and always appeared with his long hair wrought into ample ringlets which hung immaculate about his neck—but to those nearest him he was a man of the most serious purpose and perfectly genuine. He had fixed for himself a high standard and his self respect for his work was too great to allow him ever to fall below it. He carried himself through his twenty years work in the College on the exalted plane on which he began." Dr. Gunn was given an honorary LL.D. degree by the University of Chicago in 1877. He died on November 7, 1887.

Dr. Joseph W. Freer began the study of medicine at the age of 30. He had a high school education and came to Chicago direct from the farm. He worked under a preceptorship of Dr. Brainard and graduated M.D. in 1849.<sup>7</sup> He began to teach at once and filled the posts of Demonstrator of

<sup>7</sup> In the year 1847, the first general hospital in the city had been established in a large warehouse on the northeast corner of Kinzie and Wolcott (State) Streets, known as "Tippecanoe Hall." It contained 100 beds which were well filled, especially during the two succeeding years when "ship fever" prevailed among the immigrants. Dr. Freer



Anatomy, Professor of Anatomy, of Microscopical and Surgical Anatomy, Military Surgery and Surgical Anatomy, Physiology, Surgical Pathology, Physiology and Histology in succession. From 1871 until his death in 1877, he was President of Rush Medical College.

*Chandler Burwell Chapman* (1815-1877) was another prominent surgeon of those early years in Illinois. He was born in Vermont, graduated from the Vermont Academy of Medicine in 1836, and organized the Rock Island Medical School in 1848 as Professor of Anatomy. He later moved with this school to Davenport and then to Keokuk, Iowa. He studied in Europe in 1852. In the early years he took on students at his home for \$40.00 a year and gave lectures for eight weeks on practical anatomy and operative surgery. He possessed a copy of Cruveillier's "Pathological Anatomy" with colored plates—a rare book. He joined the 6th Wisconsin Regiment as surgeon during the Civil War, and later became surgeon of the "Iron Brigade." In the last year of the war he was made Medical Director of the Army of the Rio Grande, seeing service from 1861 to 1864. He died in Madison, Wisconsin, in 1877.

*Willis Danforth* (1821-1891) was born in New Hampshire. He was attached to the Indiana and Rock Island Medical School in 1848. He then practiced in Oswego, Illinois, and in Joliet for 16 years. During the Civil War he was surgeon of the 134th Illinois Infantry and Medical Director of Western Kentucky. In 1866, he became Professor of Surgery in Hahnemann Medical College, Chicago. In 1879 he moved to Milwaukee, Wisconsin, where he died in 1891.

*Graham Fitch* (1810-1892) was born in New York. Although not closely aligned with surgery in the state he was interested in politics. He was Professor of Obstetrics and Children's Diseases at Rush Medical College in 1844. Then he stepped into medicine in 1849. He served as a member from Rush to revise the United States Pharmacopoea in 1850 at Philadelphia. In the Civil War he raised a regiment in Indiana and later commanded a brigade. He subsequently served in Congress and practiced in St. Charles and Aurora, being also associated with the Franklin Medical College.

*William B. Herrick* (1813-1865) was born in Dunham, Maine. He graduated at Dartmouth College in 1836, and then settled in Louisville, Kentucky. In 1844, he came to Chicago and became Lecturer in Anatomy at Rush Medical College. During the Mexican War he served as Assistant Surgeon of the 1st Illinois Regiment, returning to Chicago in 1847. In 1850, he helped reorganize and was President of the Illinois State Medical Society. He was the second President of the Chicago Medical Society and

---

served as an intern in this institution for two years and was, therefore, the first hospital intern in Chicago.

co-editor of the *Illinois and Indiana Medical Journal*. In 1852 he was appointed Surgeon to the United States Marine Hospital in Chicago.

*David Prince*<sup>\*</sup> (1816–1889) was of English descent, born in Brooklyn, Connecticut, on June 2, 1816. He was being educated in Canandaigua Academy about the time his family moved to Payson, Illinois. Prince attended medical school in Fairfield, New York, and then transferred to the Medical College of Ohio at Cincinnati where he was assistant to Dr. Mussey for a while. Finally, having become a surgeon, he settled in Payson and Quincy, Illinois. He operated successfully upon an ovarian tumor. He became Professor of Anatomy and Surgery in the Medical Department of Illinois College at Jacksonville. Subsequently he moved to St. Louis where he occupied the Chair of Surgery at St. Louis Medical College. In 1852 he returned to Jacksonville, Illinois. During the Civil War, he was Brigade Surgeon of Graves Brigade, Army of the Potomac, and went along voluntarily with captured Union men to Libby Prison. After the war, in 1867, he established in Jacksonville a private hospital known first as "The Infirmary" and later as "The Sanitarium." In 1866, he published a book on orthopedics; he organized the Morgan County Medical Society and took an active part in the activities of the Illinois State Medical Society. He was elected delegate to the American Medical Association 11 times, and was Vice-President in 1863. His special interest in surgery seemed to lie in orthopedics, although his activities covered a wide field. With G. V. Black he devised a set of instruments for operation on cleft palate. In later years he accepted the principle of and practiced antiseptic surgery and acted as preceptor to many students. His private dissecting room was in the second story of his barn. He died of pneumonia in Jacksonville on December 19, 1889.

On review, the brilliance of this surgeon stands out most emphatically amongst his colleagues. He dealt in both general and orthopedic surgery, and had time to do much experimental work under very crude conditions.

*John B. Murphy*. Another of the rapidly advancing younger men of these years in Illinois was Dr. John B. Murphy. By 1889, he became a staunch advocate of early operation for appendicitis—one of the leading surgical disputes of the time—and in November of that year he gave a paper before the Chicago Medical Society on the subject. Unfortunately his health was impaired in the next year and, because tuberculosis was feared, he went to Colorado Springs for a long sojourn. At the age of 35, he was offered the position of Professor of Surgery at the College of Physicians and Surgeons in Chicago. About this time he became enthused with the possibility of a button connection between hollow viscera for easy and quick

<sup>\*</sup> In Volume I of this series, page 412, Dr. Prince is presented as a pioneer anatomist. Many of the facts given here were related in that biography.—*Editor*

anastomosis, taking his idea from Denans, a French Surgeon of Marseilles, who in 1826 had devised a silver or zinc ring used on the ends of the bowel loops and connected together so that the outer walls of the intestine became adherent, the inner muscle sloughed away, and the rings passed on out of the alimentary tract. Finally, in 1892, Murphy perfected his anastomosis button and performed the first operation for its use on a human being in 31 minutes at the Cook County Hospital. His first report in the literature was in December 1892 in the *Medical Record*, under the title "Cholecysto-intestinal, Gastro-intestinal, Entero-intestinal Anastomosis and Approximation Without Sutures." Up to that time only 11 cases had been put on record in which an attempt had been made to join the gall-bladder to the intestine to relieve obstruction, and only 47 complete successful cholecystectomies had been performed.

In this year (1892), Murphy joined the staff at St. Joseph's Hospital in Chicago in the capacity of attending surgeon. Senn was still holding the appointment of Chief of Staff in this hospital; his chief assistant was Dr. Hartmann who later became one of Chicago's leading surgeons.

In 1893, Murphy presented a paper before the American Medical Association entitled "Original Research in Abdominal Surgery—Ideal Approximation of Abdominal Viscera without Suture." Later the New York Academy of Medicine invited him to address them on December 7, 1893. In 1894, at the International Medical Congress in Rome, Senn belittled the Murphy button and, in his Presidential Address before the American Medical Association, he reviewed intestinal anastomosis and the use of the button. Murphy proceeded undaunted. In 1897, he gave a paper on "Resection of Arteries and Veins Injured in Continuity—End to End Suture," and also gave this as his address before the International Congress of Medicine in Moscow during August 1897. In 1898 he gave the Oration in Surgery before the American Medical Association on lung abscess and lobectomy, and reported the use of nitrogen gas by injection into the pleural cavity to produce lung collapse and to treat pulmonary tuberculosis.

J. B. Hamilton died on December 24, 1898. During his professional career he had been Surgeon to Providence Hospital in Washington, D.C. During the Civil War he had established a cholera hospital, and for a time he was Surgeon General of the U.S. Public Health Service. He later became Professor of Surgery at Rush Medical College and was Surgeon to the Presbyterian Hospital of Chicago. He had been editor of the *Journal of the American Medical Association*, Director of the Chicago Public Library and the Presbyterian Hospital, and Superintendent of the State Asylum at Elgin.

As a closing paragraph following this list of surgeons in Illinois, the



writer feels that the following tributes should be presented about *Christian Fenger*.

Dr. Fenger was the first surgeon in Chicago to perform vaginal hysterectomy and to explore the brain with an aspirating needle. He had removed intramedullary tumors before 1894. He was the first to demonstrate the ball valve action of stones in the common bile duct.

Senn said of him: "Fenger is one of the best pathologists in the country, while as a surgeon, student, writer and teacher he has no superiors."

His Chair at Rush Medical College was most ably filled by this great but very modest man.

From the volume "A Group of Distinguished Physicians and Surgeons, Chicago" (1904) may be quoted: "Fenger was the incarnation of Scientific Spirit in Surgery. . . . The value of his work is incalculable and only appreciated by those who know the conditions existing 25 years ago and the difficulties he encountered in his endeavors to spread new knowledge. He is revered as the father of scientific surgery in the Northwest and, with Senn in experimental work, aroused this section of the country so that there has grown up a group of well known younger men."

Dr. Fenger died on March 7, 1902, of pneumonia and gall stones. In his honor a bronze bas-relief plaque hangs on the Cook County Hospital wall.

## BIBLIOGRAPHY

### *Periodicals*

1. *Transactions of the Illinois State Medical Society*, Vol. 1 to 48 inclusive, 1851-1899.
2. Medical Schools of the United States; Council on Medical Education, *J.A.M.A.* Aug. 25, 1906, No. 17.
3. Black, Carl E.: Illinois College Medical School, *Ill. Med. Jour.* 23:1, (June) 1913.
4. Davison, Charles: The College of Physicians and Surgeons of Chicago, *Surg., Gynec. & Obstet.* 56:965, (May) 1933.
5. Editorial: Illinois State Medical Society—100th Anniversary, *The Peoria Medical News*, May 1940.
6. Ruud, Helga M.: The Women's Medical College of Chicago, 1870-1902, *Medical Woman's Jour.* 53:41 (June) 1946.
7. Matas, Rudolph: Surgical Operations Fifty Years Ago, *Amer. Jour. Surg.* 82:111 (July) 1951.
8. McClure, Roy D., and Szilagyi, D. E.: Halstead, Teacher of Surgeons, *Amer. Jour. Surg.* 82:122 (July) 1951.
9. *Transactions of American Surgical Association*, volumes 1 to 17 inclusive.
10. Colwell, Arthur R.: Integrity in medical practice, *Quart. Bull. Northwestern University Med. School* 24:249, 1950.
11. *17th Triennial Catalogue of Rush Medical College* (Medical Department, Lake Forest University) 1843-1895, Rogers and Wells, Chicago.
12. Lind University: *Quart. Bull. Northwestern University Med. School*, 20:247 1946.

13. Weaver, George H.: Beginnings of medical education in and near Chicago, *Proc. Inst. Med.* Chicago, 1925, Vol. 5, and *Bull. Soc. Med.* History of Chicago, 1925, Vol. 3.
14. Pioneering in Medicine in Chicago, *Bull. Amer. College Surg.* 25:255 (Sept.) 1940.
15. Anson, Barry J.: Northwestern University Medical School, *Quart. Bull. Northwestern University Med. School*, 20:247, 1946.
16. Constitution and By-Laws of the Chicago Surgical Society, revised and printed by the Society October 1, 1937.

*Personal communications*

1. Dr. Nelson M. Percy, April 30, 1951.
2. E. J. Erickson, Superintendent, Augustana Hospital, Chicago, on an outstanding community hospital maintained by the Lutheran Church.

*Books*

1. Hyde, James Nevins: *Early Medical Chicago: An Historical Sketch of the First Practitioners of Medicine with the Present Faculties and Graduates since their Organization of the Medical College of Chicago*, Fergus Printing Co., Chicago, 1879.
2. Bridge, Norman, and Rhodes, John E.: *Rush Medical College*, 1896, Oxford Publishing Co., Chicago.
3. *A Group of Distinguished Physicians and Surgeons of Chicago* (compiled by F. M. Sperry), Chicago, 1904, J. H. Beers & Co.
4. *Medical and Dental Colleges of the West* (edited by H. G. Cutter), Chicago, 1896, Oxford Publish Co.
5. *History of Medicine and Surgery and Physicians and Surgeons of Chicago* (published by the Council of the Chicago Medical Society), Chicago, 1922, The Biographical Publishers Corp.
6. *Medical Education and the Regulations of the Practice of Medicine in United States and Canada* (prepared by Illinois State Board of Health), Chicago, 1884, W. T. Keener, Chicago.
7. Martin, Franklin H.: *Fifty Years of Medicine and Surgery: An Autobiographical Sketch*, 1934, Lakeside Press, Chicago.
8. Simpson, James Y.: *Acupressure, A New Method of Arresting Surgical Hemorrhage and Accelerating the Healing of Wounds*. Edinburgh, Adam Charles Black, 1864.
9. Zeuch, L. H. (editor): *History of Medical Practice in Illinois*, Vol. 1, 1927, The Book Press Inc., Chicago.

## CHAPTER IX

# OBSTETRICS AND GYNECOLOGY

By FREDERICK H. FALLS, M.D.\*

**O**BSTETRICS is probably the oldest of the medical specialties. There prevails among many people a fundamental attitude approaching a religious faith toward reproduction and the perpetuation of the race. Indeed, the very survival of early man depended upon his ability to reproduce his kind so as to furnish soldiers for war and manpower for hunting and agriculture.

### INDIAN PRACTICES AND BELIEFS

The Illini Indians have left little evidence as to their customs but I assume that their practices and beliefs were approximately the same as those of other Indian tribes of this region.<sup>1, 2</sup>

Among the Indians, the woman was sole master of her own body. Her husband or lover acquired marital control over her person by her own consent or that of her family or clan elders. This respect for the person of native women was extended equally to captive alien women. General Clinton, fighting the Iroquois, paid them this compliment: "Bad as the savages were, they never violated the chastity of captured women." However, isolated instances of rape among the various tribes occurred and the culprits, if apprehended, were punished by the woman's kinsmen if she was single, or by the husband and his friends if she was married. Seduction was punished by grave bodily injury from the aggrieved women and girls, and this retribution was sanctioned by the tribe.

During menstruation, pregnancy and the puerperium, the Indian woman was looked upon as sacred and superhuman. It was assumed that her condition revealed a magic power so potent that, if not separated from the ordinary haunts of man, it would disturb the normal course of Nature.

\* During his career at the University of Chicago, Dr. Frederick H. Falls was member both of the baseball and the basketball teams. He graduated from Rush Medical College in 1910 and by competitive examination won an internship at Cook County Hospital. He later was appointed a member of the Department of Obstetrics and Gynecology at the University of Illinois College of Medicine, becoming Head of this Department in 1926. He has contributed many papers to medical literature. He is a recent past-President of the American Association of Obstetricians and Gynecologists.—*Editor*

<sup>1</sup> Handbook of American Indians, *Bureau of American Ethnology*, Bull. 30, part 2, 1912.

<sup>2</sup> Engelman, George J.: *Labor Among Primitive Peoples*, St. Louis, J. H. Chambers & Co., 1883.



This, however, did not affect the woman's social status in any serious way.

A common impression prevails in modern times that the menial and hard work of tilling the soil and harvesting the crops was put upon women because it was beneath the dignity of the men who were hunters and warriors. This is far from the truth. The sowing of seed by women was supposed to render such seed more fertile and the earth more productive than if planted by men, for it was believed that women have and control the faculty of reproduction and increase. Hence, sowing and cultivating crops became one of the exclusive departments of women's work.

As among other primitive peoples, the menstruating woman was considered unclean by the Indians and was required to wear certain well marked colors during the continuance of the period when she mingled with others. Also the connection with the moon was noted as among other peoples, since the Indian speaks of a woman menstruating as having "moon in the ass." It is obvious that these savages were shrewd in decreeing that menstruating women should stay in a separate hut, do no work, rest, and avoid exposure to cold or exertion. Especially were they kept away from men.

Menstruation among the Indians began between the ages of 11 and 14 years, or somewhat earlier in the southern climates. Breast development began at about the age of 12 and was completed at 18 years. At the time of the first menstruation, a ceremonial feast was held at which relatives and friends congratulated the maiden and her parents on the dawn of her womanhood.

The period of gestation was the same for Indian and white races, but marriage was entered into earlier, as a rule, in the former. Few Indian girls over 18 or men over 22 years of age remained unmarried. Families of six to nine children were average. Twins were relatively common but triplets were very rare.

Indian women were considered unclean during the puerperium and to a different degree during the time they continued to have a lochial flow, either rubra or alba.

Confinement among many tribes took place in a specially constructed shelter; this was about 8 feet in diameter and was made of boughs supplemented by strips of canvas or skins during seasons when leafy boughs were not available. The structure was destroyed after labor. In some instances a more pretentious building was erected which was used by all the women of the tribe during labor; this may have been the first lying-in hospital. In preparation for labor, two trenches about 10 to 14 inches wide were dug. One contained hot stones over which the parturient squatted (sterility), and the other was used for the disposal of excreta (avoidance of contamination). In this way exposure to infection was minimized. It was customary

to build these lying-in quarters in the vicinity of running water when possible. This provided an opportunity for the puerpera to bathe herself and her baby soon after delivery with a minimum danger of infection since running water tends to sterilize itself. Hemorrhage was treated in some tribes by squirting cold water on the abdomen or immersing the patient in running water.

Nursing was started anywhere from the first to the fourth day and was continued for one or two years. Castor bean juice was rubbed on the breast to stimulate milk flow. Asafoetida or charcoal was applied to the breast when the baby was weaned. The Indians knew nothing of breast infections or milk fever.

Transverse presentations were among the most serious complications of labor in the Indian women, usually ending fatally due to uterine rupture. The outcome was accepted philosophically by the Indians who blamed the malposition on the baby and assumed that, because it was so evil, the tribe was better off than if it had been born alive and developed into a trouble-maker in its later life.

Early ageing of Indian women was not characteristic. Little was known of the age at which the menopause occurred because few Indian women knew their age.

The facts regarding Indian obstetrics are difficult to ascertain because there is extreme reticence on the part of the Indians to discuss these subjects with white people. White doctors are rarely called in to assist, even in serious cases.

#### THE RISE OF SPECIALIZATION IN OBSTETRICS AND GYNECOLOGY

In order to understand the specific problems that confronted the early practitioners, one must view the general field of medicine of that period. Nothing was known about bacteriology as such and its relationship to the practice of medicine. Organisms were known to exist, but their significance in obstetric and gynecologic problems was just beginning to be sensed by pioneer thinkers like Oliver Wendell Holmes in 1843 and Semmelweis in 1847. It is also significant that often the views of such men were bitterly opposed by the foremost obstetricians of their times, not only abroad but also in this country. This opposition hindered the acceptance of practices aiming at the control of puerperal infections and cost thousands of lives.

Blood transfusion had not been advocated in this early period, so obstetric and operative hemorrhages were far more fatal than in later years.

The toxemias of pregnancy, too, were just beginning to be understood in a vague way and were still confused with uremia and epilepsy.

Prenatal care was practically unheard of; even in Chicago and the larger

centers there were no special provisions for obstetric care in any of the hospitals.

Epidemic diseases prevailed but their causes were only guess work. In one instance an epidemic of erysipelas raged in Moline, Illinois, for three months and all the pregnant women who delivered in that community during that period (20 in number) died of puerperal sepsis.

Public health and sanitation even in the crudest form were almost unknown.

*Medical Education.*<sup>3</sup> Illinois was fortunate in having close medical relations to two large cities, namely St. Louis, Missouri, on the southwestern edge of the state, and Chicago in the northeastern portion. Evansville, Indiana, on the southeastern border had a medical school which furnished some degree of interest in medical education and progress to Illinois. Chicago's location, at the foot of Lake Michigan and at the trans-continental crossroads, and its rapid growth attracted many able physicians who early saw the necessity for providing medical educational facilities. They had come for the most part from New York, Philadelphia, Boston and Cincinnati, and brought with them the pattern of medical education current in these centers at that time. These men, some of whom had had fairly good training in eastern schools and abroad, were sadly handicapped in their teaching by almost complete absence of clinical material. The student attended a few lectures on the subjects of obstetrics and gynecology, but there were no deliveries to attend, no pregnant women to examine and no labors to be witnessed. Books on the subject were as a rule hard to obtain and in most cases poorly written. Libraries were absent from all but the larger centers.

The rise of specialization in obstetrics and gynecology begins with the rise of the medical schools: Rush Medical College in 1843, the Illinois College at Jacksonville in 1843, and the Chicago Medical College in 1859. At first, gynecology was a part of general surgery, although early in the development of the schools certain surgeons interested themselves primarily with gynecology. These men were not specialists in the modern sense of the word since their only claim to special knowledge of the subject in most instances was that they had built up their practice along these lines and had attained a local reputation for proficiency among the laity and their professional colleagues.

The men who were called to the Chairs of Obstetrics in these centers during the 1850 period varied greatly in training and knowledge. Many had taught in some capacity in one or more of the eastern schools. In some cases they had helped to organize those schools and had then moved west-

<sup>3</sup> For a detailed account of medical education in Illinois during this period see Chapter XXI.—*Editor*



ward, impelled by the pioneer spirit of the times to seek their fortune in the rapidly expanding development of the Mississippi Valley. A considerable number had started teaching in an entirely separate branch of medicine, such as anatomy or the theory and practice of medicine. Therefore, they brought to their obstetric classes a broader outlook on the subject even than is sometimes seen in obstetric departments in medical schools of the present day. In general, they were well prepared as compared with other departments of the school, but were forced to teach without clinical material since there were no beds set aside in the hospitals of the time for obstetric patients. Didactic lectures were used to convey their ideas to their students who entered practice without having any practical experience in obstetrics except what they might have gained from a preceptor.

It may be said, then, that the general pattern of obstetric practice during this early period was that of the general practitioner delivering patients in the home and meeting complications as best he could with the meagre facilities available. He had no trained assistants, either nursing or medical, to aid him; anesthesia was not in general use, and the mortality rates for mothers and infants were high.

By 1880, according to Dr. G. W. Nesbitt of Sycamore,<sup>4</sup> Chairman of the Committee on Obstetrics of the Illinois State Medical Society, medical education had advanced steadily in most other branches but had lagged behind in obstetrics. Most of the teaching was by didactic lecture with little or no practical experience for the student, although the teachers were competent. He felt that the schools should provide proper training and practical experience, and he suggested that the faculties of the Illinois medical colleges through the Illinois State Medical Society bring the matter before the Association of American Medical Colleges. He felt that each medical school should have a lying-in hospital attached where undergraduate and postgraduate students could serve in outpatient delivery service for which a special fee could be charged; that patients be required to register for this service one month before going into labor; that the service be under the direction of competent instructors and that a special clause on the diploma of the medical student would testify to the fact that he had had practical training in midwifery under their direction. Thus, it is seen that a small town country doctor in Illinois in 1880 was farther ahead in his thinking on proper teaching of obstetrics than anything that had been proposed or at least had been put into operation in this country up to that time.

By 1886, Dr. E. Ingals advocated endowed faculties for the medical schools, and entrance examinations to cut down the numbers and to improve the quality of medical students. He thought also that the Board of

<sup>4</sup> *Transactions of the Illinois State Medical Society*, 1880.

Trustees of the medical schools should be made up of business men with no financial interest in the school.

Formal postgraduate instruction in obstetrics and gynecology was begun with the formation of the Chicago Policlinic at LaSalle Street and Chicago Avenue in July 1886. It grew to have a clinic attendance of 30,000 and 250 students attended during the year. Dr. F. Henrotin was Secretary and Professor of Gynecology; Dr. Henry Hooper was Professor of Obstetrics, and Dr. Henry Banga was added as a Professor of Gynecology, with the later addition of Dr. Denslow Lewis. Drs. C. S. Bacon and C. E. Manierre were later named to the Department of Obstetrics.

Two years later (1888)<sup>5</sup> a group of doctors left the Policlinic School to found the Postgraduate Medical School of Chicago. This school prospered. It was associated with the Chicago Medical College which later became the Northwestern University Medical School. These schools were the first to provide specialized training for men practicing in communities around Chicago and in the Middle West, and who had previously been forced to go to one of the eastern cities or to Cincinnati or St. Louis for such instruction. Returning from these refresher courses, which consisted largely of lectures, demonstrations and operative clinics, these men were considered specialists in the communities where they were practicing.

Dr. Joseph B. DeLee graduated from medical school in 1891,<sup>6</sup> and the notes he made as a student at the Chicago Medical College indicate some of the teaching handicaps of the time. There was no provision for demonstrating clinical material to undergraduates. To offset this the students would make up a purse by passing the hat; half of the sum collected was given to the patient whom they had persuaded to come to the school for delivery by Dr. Jaggard (then Professor of Obstetrics) before the class, and the other half went to Mercy Hospital for her care. Later, Jaggard, by clearing out bones, skeletons and anatomical dissections from a room under the anatomical amphitheater, acquired a space large enough to house two beds. Women were delivered in the amphitheater after the cadavers were removed, and after delivery they were kept in the two-bed obstetric ward under the seats of the amphitheater. The janitor fed these patients, and visiting nurses bathed the babies and dressed the mothers. The following week they would be wheeled back into the pit and Dr. Jaggard would demonstrate the physiology and pathology of the puerperium and of the newborn. Occasionally a student could induce a motherly old woman to let him deliver her at home. This practice was forbidden by the school after a lawsuit was filed against it by the husband of a woman who died of puerperal infection after such a delivery.

<sup>5</sup> *History of Medicine and Surgery and Physicians and Surgeons of Chicago, 1803-1922.*

<sup>6</sup> Fishbein, Morris, and DeLee, Sol T.: *Joseph Bolivar DeLee, Crusading Obstetrician*, N. Y. E. P. Dutton, 1949.

At his graduation in 1891, Dr. DeLee's total undergraduate experience in obstetrics was seeing two deliveries through opera glasses from a high seat in the anatomy amphitheater. The majority of medical schools of that day furnished even less instruction in obstetrics.

The decade from 1880 to 1900 saw the further development of medical schools. Also some men were able to devote a considerable portion of their time and energy to teaching or in training themselves in certain branches of clinical medicine beyond what was offered in the ordinary medical school course. Thus they may be looked upon as the first trained specialists.

*Hospitals.* The rise of specialization in obstetrics and gynecology, as in other branches of medicine, received great impetus from the organization of staffs to man the new hospitals that were being built, and especially those which were connected with medical schools.

Mercy Hospital was founded in 1849. It was first called the Lake House and had ten beds. The Sisters of Mercy had come to Chicago in 1846; four left the Mother House and took charge of the hospital in 1851, which was at that time called the Illinois General Hospital of the Lakes. Dr. William H. Byford was the gynecologist and obstetrician of this group. In 1859, Dr. N. S. Davis formed the Lind Medical School (later to become the Chicago Medical College and later Northwestern University Medical School). The faculty immediately contracted with Mercy Hospital to furnish free medical and surgical care in return for the privilege of holding clinics. In 1869, the present site on Calumet Avenue was chosen and a structure erected which was considered to be the finest institution of its kind west of New York.<sup>7</sup>

There is no mention made of the use of the City Hospital (forerunner of Cook County Hospital) which opened in 1859 as an institution equipped to accept obstetric patients. It was taken over by the United States Government from October 29, 1862 to November 12, 1865 and used as an Eye and Ear Hospital for the Army. On January 1, 1866, it was opened as a general hospital for care of the indigent sick of Cook County. Dr. H. W. Jones was the obstetrician and gynecologist. When the staff was reorganized in 1869, he was succeeded by Dr. Thomas D. Fitch with Dr. Byford as consultant.

In 1869, Dr. William E. Quine was the second intern appointed to the Cook County Hospital. Describing the obstetric service of that time he said: "Bacteriology and hematology were undeveloped and asepsis was unknown. Interns engaging in postmortem work or who were in touch with erysipelas or gangrene were assumed to have no connection with obstetrical cases, but there was no stern rule against it, and they thought no ill of maintaining friendly relations with laudable pus. Puerperal infections were frightfully

<sup>7</sup> Dr. Byford here performed the first ovariectomy in Chicago during the winter season of 1871-72.



frequent and deadly, and the obstetrical ward was closed on two or three occasions for several weeks on account of them. During these intervals the windows were kept wide open night and day. Atomizers were kept busy sputtering weak antiseptic vapors into the atmosphere. Walls and ceilings were freshly whitewashed and all woodwork was scrubbed with antiseptic solutions, but the old deadly ignorance of personal transmission of infection continued."

The Woman's Hospital Medical College was founded in Chicago in 1870, later to be known as the Woman's Medical College and still later Northwestern University Woman's Medical School. Dr. William H. Byford, one of the founders, was President of the Faculty from its founding until his death in 1890. Dr. Mary Thompson was one of the first class to graduate from this school and she was immediately put on the faculty and helped with the program of further developing the institution.

The Presbyterian Hospital organized its Medical Board in 1884 with Dr. DeLaskie Miller and Dr. J. Snyder Knox attending physicians in obstetrics and diseases of children, Dr. James H. Etheridge attending gynecologist, and Dr. William H. Byford as consulting gynecologist.<sup>8</sup>

In 1894, the Chicago Maternity Hospital and Training School for Nurses was organized by the Directors of the Children's Aid Society of Chicago, whose ideal was to teach young mothers the care of babies, and to keep mothers and babies together. It was the first institution dedicated to maternal welfare in the State of Illinois.

The Chicago Lying-in Dispensary was opened at noon on February 14, 1895. The staff consisted of Dr. Joseph B. DeLee and a Dr. Florence N. Hamiafar who served as matron.<sup>6</sup> She had been injured by sunstroke and could not practice. After many trials, they got through the first year and delivered 204 babies. The second year 549 were delivered, and the third year 840. Students were called on all cases. DeLee did the delivery and members of the Visiting Nurses Association did the postpartum care. The first interns who signed up on June 1, 1896, were Drs. Charles Lockwood and Charles Todd.

In June 1899, the Chicago Lying-in Hospital was opened in a rented house at 294 Ashland Avenue, Chicago. There was strong opposition by the people owning property in the immediate vicinity who felt that the presence of such an institution would depreciate the value of their property. An appeal was made to Mayor Carter Harrison of Chicago to prevent the opening of the institution, insinuating that Dr. DeLee was promoting it

<sup>8</sup>I have been unable to determine whether at this time any special provision was made in any of these hospitals for the individual isolation of patients, or for an obstetrical department as such. One might assume that delivery rooms were provided to take care of patients in active labor.

from purely selfish motives. However, the Board of Directors of the institution were sufficiently influential to overcome this resistance and thus the forerunner of the present Chicago Lying-in Hospital was established. It soon began to fulfill its important function in providing educational facilities for the training of obstetric specialists.

*Specialty Societies.* The necessity for a medical society was recognized by these early doctors. The profession began to emerge from a heterogeneous mass of isolated practitioners, each doing what he could in general practice to meet the problems of his community, into a rather loosely organized medical society. This afforded its members a forum to which they could bring their problems for free discussion, and where they could receive advice and inspiration from contact with their professional colleagues.

The Illinois State Medical Society was formed (reorganized) in 1850 with only about 30 members. In almost every year after its formation, a portion of the Society's program was given over to a report of a committee on subjects related to obstetrics or gynecology or both. The chairmen of these committees varied widely in their knowledge of the subjects on which they reported. For the most part, they were busy practitioners who were selected to give the report because of some real or fancied special knowledge of the subject. Their remarks were confined for the most part to relating personal experiences, usually a successful case report which would reflect credit upon the author. A few, however, had a better grasp of the specialty since they had traveled in England, France, Austria and Germany and had brought back some of the traditions and practices of European clinics.

In 1878, Dr. William H. Byford, who was then a founder member of the American Gynecological Society, called together at his home a group of physicians interested in the specialty of obstetrics and gynecology to organize the Chicago Gynecological Society. This group included Drs. Byford, deLaskie Miller, A. Reeves Jackson, James H. Etheridge and H. W. Jones. The original members of this Society, in addition to those already mentioned, were Drs. Charles Warrington Earle, Henry T. Byford, Daniel T. Nelson, Henry P. Merriman, E. C. Dudley and E. W. Sawyer. For the first few years, meetings were held at the homes of the members and a presiding officer was elected at each session. Five of these men attained the honor of becoming members of the American Gynecological Society, as were one-half of the presidents of the Society elected in later years.

When the Chicago Gynecological Society was organized in 1878, its membership was limited to 50 residents of Cook County and 10 non-residents. Candidates for admission were required to have engaged in the scientific and practical development of gynecology or obstetrics for five years. The foremost teachers and research men of the specialty in this area have since

been active in the work of the Society, and it has assumed a prominent place in the ranks of similar societies throughout the United States. It is to be regretted that no similar organization embracing the medical men in other parts of the state was developed at this time.<sup>9</sup>

*Professional Progress.* The advances made in the practice of obstetrics and gynecology are recorded in the papers and reports presented before the Illinois State Medical Society.<sup>10</sup> As interest and knowledge in these two subjects increased, they became more definitely established as specialties within the general field of medicine.

#### 1850—1860

What was thought to be the first recorded case (1853) of development of the placenta in the fallopian tube in Illinois by Dr. C. N. Andrews of Rockford, probably was a pregnancy in an arcuate type of bicornuate uterus. The patient delivered a small child, following which she had a retained placenta and an uncontrollable postpartum hemorrhage. The placenta was removed piecemeal by instruments and the hemorrhage controlled by a pack. The same result was encountered with her second pregnancy and again with severe postpartum hemorrhage. With her third pregnancy, while walking in the garden, she suddenly was seized with a severe pain, then fainted and died almost immediately. Autopsy showed a rupture of the uterus, possibly predisposed to by the previous manipulations necessary for instrumental removal of the placenta in the two previous pregnancies. The fact that the autopsy report did not mention the type of bicornuate uterus means that the degree of deformity was minimal.

In 1857, Dr. W. M. Chambers of Charleston reported on a condition called "stomatitis materna." This is probably the first mention in Illinois of vitamin deficiency disease during pregnancy. He stated that gestation and nursing furnished the cause of the disease since nonpregnant and non-lactating women did not have it. He noted also that the correction of dietary deficiencies resulted in cure. He explained the etiology by saying that the entire nervous system is sympathetic with the pregnant uterus and that the manifestations of the disease were brought about by shattering the nervous system. He thought that it must be a blood disease, not due to any poison but rather to a deficiency in the natural healthy constituents of the blood, or to a portion of its constituents being below the standard of normal gestation. He quoted Simon who had examined the blood of nine pregnant women and found that pregnancy exercised a marked influence

<sup>9</sup> This defect has been corrected in recent years and a flourishing Illinois Obstetrical and Gynecological Society of over 100 members has been organized (1945) and is growing in importance and influencing the development of specialization throughout the state in a very significant manner.

<sup>10</sup> *Transactions of the Illinois State Medical Society 1850 to 1900.*



on the composition of the blood, in that the density of defibrinated blood and serum diminished, and water, fibrin and phosphorized fat increased, and corpuscles and albumin were diminished. This was probably the earliest mention, at least in Illinois, of disturbed water balance during pregnancy.

Anesthesia (chloroform) had been discovered in 1847. It is, therefore, astonishing to note that in 1859 a series of 500 cases delivered under chloroform anesthesia was reported by Dr. D. W. Young. A careful analysis was made of the advantages and dangers of the procedure, and recommendations were made for its use which might well be used today in obstetric cases. The dangers of the production of desultory labor were pointed out, together with the tendency to uterine relaxation postpartum predisposing to hemorrhage. The deleterious effect on the newborn baby was also emphasized with special mention of deaths due to respiratory failure. Dr. Young claimed that if chloroform were judiciously administered by putting it on a loosely folded silk handkerchief in amounts just sufficient to stop pain, it would safely and successfully alleviate and annihilate the suffering incident to childbirth. When given in this way, no ill effect was noted on the baby or mother, and in no case in his series did the anesthesia have to be discontinued. He used about 6 ounces in six hours of labor.

Some practitioners condemned the use of anesthesia in any case, implying that pain is a necessary accompaniment of labor. Others hailed it as a great boon to suffering womanhood and used it to excess. Most of the men of this day, however, agreed that anesthesia had a place in obstetrics and should be used cautiously for analgesia and only rarely for complete anesthesia. Evidently the bad effect of morphine to relieve the pains of labor was well recognized, since it is seldom mentioned in their discussions on anesthesia.

Gynecology was not as far advanced comparatively as obstetrics in the decade from 1850 to 1860. For example, the difficult problem of carcinoma then had to be met as best it could be with the limited knowledge of the condition and equipment for its treatment. In 1859, Dr. William H. Byford described cancer of the cervix uteri in a woman who had been bleeding irregularly for 18 months. He found a polyp which he attempted to ligate; this resulted in severe hemorrhage and some disintegration of the mass. Within four or five weeks this was reduced to the size of a hen's egg, when another attempt at removal was made. Biopsy showed it to be carcinoma. It was removed repeatedly as it recurred and made defecation and urination difficult. The technic followed was removal every two weeks by *ecrasseur* with cauterization of the stump by caustic potash. The patient complained of relatively little pain. Postmortem examination revealed bladder involvement. In reviewing the case, Dr. Byford was frank enough

to admit that the caustic potash did not help in the treatment of the condition and might actually have done harm.

1860—1870

Relatively little information can be gleaned from this decade as medical practice and teaching were so disrupted by the Civil War. However, it is significant that all deliveries, except major obstetrical operations, were done in the home since there were then very few hospitals in the state and these were largely intended for surgical cases. As already stated, bacteriology was practically unknown and, of course, not taught in any medical school. There was no electric light or other strong illumination. All obstetric operations were done on a low bed or on a kitchen table, without proper anesthesia, and with the untrained assistance of the husband or neighbor women in the great majority of cases. Few of the doctors had any surgical experience or training, except that gleaned from injuries treated in their own practice or that of a colleague. Picture the plight of one of these general practitioners alone with his patient's family in a lonely farm house at 3 A.M.; an exhausted woman in labor about whose physical make-up and prenatal course he knows nothing and whose baby is showing signs of severe distress. A difficult forceps delivery is indicated which would try the skill and exhaust the strength of a DeLee or Williams, but this practitioner is forced into doing an operation which he knows he is incompetent to do. Thus can one arrive at a realization of what obstetrics of that day might imply.<sup>11</sup>

Some of the men, even at this early time, had a keen insight into the basic problems of obstetrics. For example, Dr. DeLaskie Miller, Professor of Obstetrics and Diseases of Women and Children at Rush Medical College, writing on puerperal sepsis in the years 1861—1864, thought the cause was "zymotic." He advised that parturient females should not be placed contiguous to patients with puerperal fever, erysipelas or gangrene. He held that the disease spread from contact with clothing, the surface of the body and the breath of attendants. He questioned the advisability of having a lying-in hospital, and felt that most women were safer if delivered in a cabin. He felt strongly that physicians should give up caring for infected cases if they were to take care of other pregnant women. In his opinion, bloodletting, which was freely practiced at this time, was worthless in puerperal disease. Miller advised that chlorine solution be used in the vagina or even in the uterus, either in the form of vapor or solution, but he relied chiefly on general support.

<sup>11</sup> Some indication of the remuneration for obstetric service in Chicago can be gained from the fact that a Dr. Wanzer in 1849 charged fifteen dollars for a maternity case. It is also interesting to note that a Mrs. Robertson had a very lucrative practice in obstetrics but no medical degree. One historian calls her the "feminine Hippocrates."

Eclampsia at this time was considered to be best treated by vena section, and chloroform was administered both pre- and postpartum. Twenty-five per cent of the women who developed this disease died.

A paper by Dr. B. H. Cheney in 1869 indicated that placenta previa centralis was treated in the following manner: A tampon was put into the uterus to detach the placenta and chloroform was given to relax the os. The patient had been taking whiskey as a stimulant. As soon as the cervix was sufficiently dilated, a Braxton-Hicks version was done. The baby died and the patient barely recovered after a "fearful" loss of blood. The mortality incidence of this condition at this time was one out of three mothers and 50 per cent of the babies.

#### 1870-1880

In the decade from 1870-1880, the management of obstetrical hemorrhage seemed to occupy more and more the attention of physicians interested in obstetrics. In 1873, blood transfusion was just beginning to be tried in England and France. Controversy arose regarding the effects of this procedure, especially when animal blood was given human recipients. Serious reactions were often noted and the procedure, therefore, was not endorsed by the obstetricians as a safe method to combat hemorrhages. Ponfic, for example, noted hemolysis of red cells in a woman who died twenty minutes after transfusion with lamb's corpuscles.

Dr. J. B. Rood, in 1873, described the method of combatting postpartum hemorrhage by the injection of perchloride of iron in the uterus. Hot water injections were also used for postpartum hemorrhage, the water being kept at 100° F. Cold water had been found ineffective. Hot water was also used for controlling hemorrhage from abortion, placenta previa, fibroids and carcinoma, and in cases of menorrhagia.

In 1875, Dr. Joseph W. Freer reported on blood transfusions, including the use of defibrinated blood and artery-to-vein direct transfusion. Blood transfusion was also used in anemias and tuberculosis. In some instances, blood was stored 72 hours in the ice box before use. Thus we see the germination of the idea of the blood bank. Early in the study it was noted that deaths occurred from hemolysis of blood cells in some cases. Fatal transfusion reactions were well known long before the principles of blood matching were worked out and before the dangers of the procedure were clearly recognized. This caused the procedure to fall into disrepute. It is much to the credit of these early pioneer obstetricians that blood transfusion did not then come into general use in obstetric cases.

In his paper Freer said that in case of danger from acute hemorrhage "so certain is transfusion of normal blood to resuscitate and restore life that we feel warranted in asserting emphatically that the practitioner in



charge is under the most sacred obligation to perform this operation of transfusion. Moreover, once acquainted with his duty under such circumstances he should lose no time in acquiring, if he has not already, both means and skill to meet all emergencies of this kind." Direct transfusion was carried out by Freer by means of a rubber tube with a bulb attached to the center permitting aspiration and expulsion of blood.<sup>12</sup>

Physicians were also interested at this time (about 1875) in the diagnosis of sex in utero by means of the heart beat. Several papers written after a careful study of the subject condemned the method as useless.

Dr. L. B. Slater, in 1876, made a study of mortality in placenta previa in Illinois. He quoted a mortality of 1 in every 3.6 cases in England using version. About this time Simpson suggested the advisability of dilating the cervix manually, detaching the placenta and doing a version and extraction; he reported a mortality of 1 in 14. Barnes at this time in England reported an 11 per cent mortality when expectant treatment was used. A tampon was placed in the vagina and the patient kept at rest in a horizontal position until delivery. All the babies of these cases died. Slater also suggested that blood transfusion would be useful in such cases but had not used it.

It was also in 1876 that Dr. A. Reeves Jackson denied the universally accepted theory that ovulation and menstruation were coincidental. He based his opinion on careful observations made at operations in which he found evidence of rupture of follicles at times other than the menstrual period.

The year 1876 is interesting also for a report by Dr. D. E. Foote of the case of a physician who was called to attend an erysipelatous phlegmon. He opened this, developed a sore on his own finger, then attended two puerpera both of whom developed fatal puerperal peritonitis. One of these women was nursed by her husband who developed erysipelas shortly afterward and was ill for a long time.

Obviously at this time there was little major gynecologic operative work being done, and much of the discussion in gynecology was concerned with the use of various instruments for diagnosis, and the treatment for support of prolapse of the uterus and repair of obstetric lacerations. Dr. T. Davis Fitch, in 1878, reported on a modification of the Emmet operation for repair of the lacerated cervix which included bilateral denudation and repair without general anesthesia. He believed that the operation would aid in the cure of backache, leukorrhea, granulation of cystic degeneration of the cervix which recurs after treatment, hysterical neurosis and nervous

<sup>12</sup> This might be considered the first artificial heart which is playing so vital a rôle in surgical research on cardiac disease at the present time.

exhaustion, hyperplasia with or without deformity, sterility due to non-retaining power or acid secretions. He also claimed that the operation should be used in all persons who displayed a disposition to cancer.

1880—1890

About 1880 again the use of anesthesia in obstetrical cases claimed the attention of the medical profession and several papers were read and discussed before the annual meetings of the State Medical Society on this subject. Strangely enough the same divergence of opinion prevailed then as is noted now among members of the profession. They tried various drugs and combinations of drugs in an attempt to hit upon an ideal mixture which would nullify the pain of labor without interference of its orderly progress. Then, as now, some men claimed that deliveries were even hastened by the use of anesthetics. However, deep anesthesia except for difficult operative deliveries was never used. Chloroform seems to have been the most popular, and was used with equal parts of ether or with a little alcohol (1 to 5 of the mixture). Chloral hydrate was used per rectum with or without ether. Ethyl bromide was also used, although considered dangerous by some. The danger to the child from the use of anesthesia in the mother was considered, but not much evidence of harm was adduced, probably because deep anesthesia was rarely used.

In 1879, Dr. David Booth of Sparta declared before the State Society that anesthesia should not be used for the following reasons: (1) it promotes vomiting; (2) changes spontaneous labor into forceps cases by promoting inertia and preventing the patient from aiding with the expulsion of the baby. He felt that the patient should be responsive to trauma during forceps delivery and said that involution was retarded by anesthesia.<sup>13</sup>

In 1880, Dr. E. L. Herriott of Jacksonville also reported on the status of anesthesia in obstetrics. He wrote to 200 members of the Illinois State Medical Society, asking for a report on their individual experiences; 17 used anesthesia quite frequently when indicated; 12 reported limited use only; 3 had no reason to use it, and 2 were opposed to its use. Dr. Herriott himself advocated the use of general anesthesia "whenever the pain of labor is so severe that the patient welcomes it without fear of consequences." He felt also that pain was a stimulant and lessened the danger from anesthetics. In his experience there were no deaths from anesthesia. Ether, chloroform and ethyl bromide were used, and at that time the latter was more favored by many men. Herriott stated: "My preference is for equal

<sup>13</sup> In 1953 we find anesthesia is still one of the important causes in maternal mortality. Forceps are more frequently necessary if anesthesia is used, and maternal tissues are often badly damaged because the operator does not realize the force he is using and its effect upon the patient's tissues.

parts of chloroform, alcohol and ether, and if everything goes favorably I leave the stopper in the ether bottle." He stated further that "the time to commence anesthesia during labor is when without it the patient will unnecessarily suffer and the time to withdraw is when without it she will not suffer." The danger to the child from deep anesthesia given to the mother was brought out by discussion of his paper. Dr. Herriott's viewpoint on anesthesia could well be adopted by all obstetricians at the present with great benefit to all concerned.

The decade 1880-1890 is the period in which specialists in obstetrics and gynecology were gaining more recognition by virtue of their training and experience. Dr. A. Reeves Jackson in 1881 made a plea to the other members of the Illinois State Medical Society to recognize these men and cooperate with them by calling on them for help in difficult cases.<sup>14</sup> He cited the recognition and use by gynecologists of the vaginal speculum, the use of the uterine sound for exploring the uterine cavity, the use of silver wire sutures in closure of a vesicovaginal fistula, and the first ovariectomy performed by Dr. Ephriam McDowell. He also pointed out that operations for rupture of the perineum, prolapse of the uterus and deep lacerations of the cervix were being performed by prominent American gynecologists.

Contemporary specialists abroad at this time included such men as Simpson, Hegar, Spiegelberg and Pehan, and in the United States there were Dewees, Meigs, Hodge, Emmet, Thomas and Atlee. It was the teachings of these men brought to the western prairies and put into practice that dominated the medical thinking of the period.

It was during this time that cancer was being treated by Chian turpentine and flowers of sulfur taken by mouth (the first cancer cure?). It is interesting to note that this remedy was properly sponsored and advocated by Dr. Clay of Victoria Hospital, Manchester, England. It was later tried out by the London Cancer Hospital and by the medical society of one of the large English cities and was pronounced worthless. However, both the British public and the profession were so impressed by the alleged beneficial results of its use that the price skyrocketed and Chian turpentine was sold for four times its weight in silver. It soon became rare. Dr. Edmund Andrews of Chicago saw several new cancer cases a week and used this treatment in 100 cases, many of which were operated upon. He reported some which became obviously better after taking the drug, but the majority progressed rapidly to a fatal end. He concluded that every cancer in a proper location should be excised early and the remedy taken afterwards. As the result of his experience, he advocated that all neglected

<sup>14</sup> It is now mandatory in many parts of Illinois to carry out these suggestions made by Dr. Jackson so many years ago.



cases, where there was no chance for successful operation, be used to prove or disprove the benefits to be expected from this remedy. History has tended to repeat itself many times since.

Other gynecologic procedures being advocated were trachelorrhaphy in severely lacerated cervixes, and repair of birth injuries at the time of delivery rather than at a later date. Dysmenorrhea was being treated by German camomile tea, electricity, viburnum compounds, mechanical dilatation of the cervix and removal of polyps!

In 1882, Dr. Edward W. Jenks of Chicago claimed that the work of American gynecologists was superior to that of European gynecologists who were slow or unwilling to give credit to advances made by Americans. Garsnier, writing in the *Dictionnaire Annuel* of Paris in 1882, stated that there was a tendency in America to think that all disease stemmed from the uterus and that a similar idea had prevailed to some extent in France. It was his opinion that the American Gynecological Society was unlike anything in France and predicted that it would have a far-reaching effect in advancing gynecology in America. In discussing the Emmet operation of trachelorrhaphy, Garsnier warned against the idea that all gynecologic complaints would be benefitted by repairing a cervical tear, if present; the prophylactic value of the operation in preventing epithelioma was pointed out, especially if the patient had a predisposition to cancer by heredity. He suggested that the use of Listerism during ovariectomy was too toxic on the peritoneum. However, he advocated the use of carbolic acid spray on the table and instruments, and soaking the sponges in carbolic acid after they were soaked in sterile water.

Complete hysterectomy for carcinoma was just beginning to be advocated. Dr. Christian Fenger wrote an excellent paper on the subject, published in the January 1882 issue of the *American Journal of Medical Sciences*. Several published reports stressed the following points: Freund favored abdominal total hysterectomy because of the difficulties encountered in vaginal hysterectomy. Playfair thought the abdominal operation was too complicated, but admitted that an early diagnosis would make it much more available. Long before abdominal hysterectomy was being done, Blundell, an early obstetrician, removed the uterus vaginally in four cases. Mortality from removal of the uterus for all causes was 75 to 80 per cent, and for fibroids was 50 per cent. The operation was advised only as a last resort in a patient suffering extreme pain. The Beatty operation for removal of the ovaries when the fibroid uterus could not be removed was also used for dysmenorrhea and neurosis, showing that the relationship between the endocrine activities of the ovaries and the stimulation of endometrial growth during the menstrual cycle were appreciated by these surgeons.

In the year 1883, a vaginal hysterectomy was performed in Peoria for complete procidentia of the uterus which had been prolapsed continuously for six years and intermittently for twelve years. The operation was done under ether anesthesia and took one hour and ten minutes. No repair was attempted, but the denuded posterior vaginal wall and the posterior surface of the bladder became adherent to each other and closed off the vagina, thus providing support for the abdominal viscera. The patient sat up a little at the end of five weeks, easily walked across the room alone in seven weeks and went home in two months!

Dr. Charles Warrington Earle stated in 1885 that postpartum hemorrhage could be treated by the farradic current with excellent results. The practitioner was advised to stay by the patient's bedside for at least an hour after delivery to assure himself frequently that the uterus was contracting firmly.

Up to this time carbolic acid had been used as an antiseptic for intra-uterine douche. Bichloride of mercury 1:1000 largely replaced it but there was evidence that some cases showed mercurial poisoning following its use.

Eclampsia was now beginning to be better understood, and the relationship of albuminuria to the disease was noted as an effect rather than a cause. The good rules for prenatal care which were laid down were much like ours of today:

Use of tonics and iron for the blood.

Liberal diet.

Stimulation of functions of the skin to relieve tensions of the kidneys.

Examination of the urine for albumin after the fifth month or earlier, if there is probability of renal disease.

Warm bathing in water 108° to 110° was believed to be of great value and would not cause premature labor.

Force fluids and milk diet.

Purgatives and diaphoretics.

Induction of labor when these means failed to improve the threatening cerebral symptoms.

There were 480 deaths from eclampsia reported in Boston from 1867 to 1876; the Chicago statistics were said to be worthless.

Management of retained placenta and membranes was well described. A period of watchful waiting, often trying Credé expression, was advised, supplemented if necessary by gentle traction on the cord. If this failed, the sterile vaginal examination was resorted to, assisting the exit of the placenta from the uterus by helping with the fingers of the examining hand. The danger of removing a densely adherent placenta was pointed out. Procrastination in the delivery of the placenta after a few hours, even if there was no hemorrhage, was considered to be unwise because operation might have to be performed later in the presence of severe infection. The use of anti-

septic solutions during these manipulations and the need for meticulous cleanliness in carrying them out were stressed.

Ectopic pregnancy had only recently been understood and naturally had excited particular attention. A most remarkable type of treatment was suggested and practiced by Thomas of New York: When the usual presumptive signs of pregnancy were followed by paroxysmal pelvic pain, irregular bleeding and a small tumor in the region of the tube, an ectopic pregnancy was suspected or diagnosed. The destruction of the life of the fetus was the logical answer to the problem of preventing rupture of the tube. This was thought to be best accomplished by use of the electric current in the following manner: the negative pole was introduced into the rectum and the positive pole over the gestation sac. The current was applied at different times and in different strengths until the size of the tumor diminished, pointing to death of the fetus. In advanced abdominal gestation at term, operation was advocated. In case of prolonged gestation with a dead fetus, a hands-off policy was advised until lithopedon formation had occurred, unless sepsis supervened.

Dr. O. B. Will of Peoria in 1885 wrote a paper on the use of the microscope in gynecology. He said that this instrument, in the estimation of many members of the profession, had at least a very uncertain position in practical medicine. Dr. Will, however, defended the use of this instrument by the general practitioner, although he pointed out that training and practice were necessary to arrive at a definitive diagnosis. He warned his fellow-practitioners only to interpret microscopic reports in conjunction with clinical facts, a conclusion which is just as valuable today as when it was written. Dr. Will indicated that malignant tumors of the uterus could be demonstrated by biopsy specimens but pointed out that several cases had been misdiagnosed by eminent microscopists, which statement revealed his keen insight into the subject. By means of a sharp cannula, he removed a plug of suspicious tissue from the cervix, obtaining what corresponds to our punch biopsy, which enabled him to study invasion by the malignant cells. Carcinoma of the uterus thus could be differentiated from ulcers of various forms, and carcinoma of the cervix could be differentiated from erosion. The most astounding statement in the light of our present day research on cytology is seen in the following quotation: "From microscopic examination of the discharges from the uterus and vagina much valuable information has been attained. The existence of malignant neoplasms (carcinoma and sarcoma) has been revealed in this way when it was not suspected and thereby a correct treatment instituted in its incipency." Dr. Will related such a case, proved both by biopsy and postmortem. He also studied fluids aspirated from the abdominal cavity and found columnar cells in some patients with malignant ovarian cysts, as well as hair and epidermal scales in patients with dermoids.



In 1886, Dr. W. W. Jaggard reported on the anatomical changes in the cervix and lower portion of the uterus during the course of pregnancy and labor. This was based on the remarks of Braun, Schroeder, Bandl, Mueller and others with whom he had come in contact in Europe. This was the first scientific exposition presented before the Illinois State Medical Society and marked the beginning of the influence of the German schools on the thinking of American obstetricians and gynecologists. Jaggard also discussed hyperemesis gravidarum, clearly indicating the part played by neurosis. Twenty-eight uncontrollable cases were reported; 14 of these women recovered and 14 died. In 20 cases pregnancy was interrupted before the period of viability; 16 recovered and 4 died. Rectal feeding, stomach tube, gavage, farradic current per rectum and painting the pharynx with cocaine all were used, as were blisters over the fourth dorsal vertebra, and chloral hydrate and bromides as sedatives. In patients with disproportion resulting in dystocia, forceps or version was tried; if they failed, craniotomy was performed.

At this time eclampsia was thought to be due to the retention of end products of metabolism from retention of urine. Albuminuria was not always found, and it was emphasized that a normal kidney might be seen even in a fatal case. Attention was called to spasm of the muscular walls of the vessels and it was pointed out that pressure on the ureters might cause obstruction. The condition was found to be more common in primiparae and was treated by hot baths.

Also in 1886 Dr. B. Ruppe of New York reported before the Illinois State Medical Society a remarkable case of vesicovaginal fistula following three days after delivery in a patient with typhoid fever who was treated in an equally remarkable manner: she was placed in a wash tub for 21 days, immersed in warm water, and at the end of this time the fistula had closed spontaneously.

Dr. O. B. Will was Chairman of the Committee on Obstetrics of the State Medical Society in 1889. In his Chairman's Address he discussed physiologic childbirth as follows: "It nevertheless is subject to pathological conditions which develop because of her environment, parentage, occupation, education, moral and mental atmosphere, fashion and all the other demands of the age, and has thereby been forced to suffer a departure from the standard of perfection seen in nature's usually beautiful adaptation of means to ends. Since this is so, it is necessary for practitioners of midwifery to be apprehensive in no small degree about normal childbirth and leads them to an exercise of judgment and art as a solution of this, nature's apparently corrupted problem."

Dr. Will also referred to what he termed "that colossus of modern medi-

cine—the germ theory of disease.” He insisted that organisms normally present in the generative tract were generally innocuous and that the problem in lying-in hospitals at least, and probably elsewhere as well, was to prevent the entrance of virulent organisms. To this end he recommended scrupulous cleanliness and preparation of the patient before any vaginal examination was attempted, and that both the doctor and nurse attending an obstetrical case use the most efficacious antiseptic known, namely, the perchloride of mercury in a strength not less than 1:1000, on the hands, catheters, and the sponges used for external washing. Since he felt that disinfection of the accoucheur’s hands was most important, he recommended that particular attention should be given to the fingernails and that, when they were about to be introduced into the vagina, they should be filled beneath their tips with soap scraped by them from the toilet cake at hand. He considered soap to be of great value as it was the safest lubricant available. “It is true that most women escape infection of such nature and in such way, but many do not, and the numerous instances of death from chills and fever, malaria, inflammation of the bowels, milk fever and general debility,’ from which so many women are reported as dying during the puerperal period are suggestive of the ignorance and carelessness with which these well known principles of modern medicine are treated. It is a shame and a disgrace that such should be the case. It is worse than that—it is a crime. . . . It is now almost universally admitted that the finger should be inserted into the vagina as infrequently as possible. In fact, only frequently enough to secure the necessary knowledge of position and progress, in view of the greater probability of thereby introducing septic matter into the organism, even if the member has been rendered as innocuous as possible. This precaution is particularly valuable where the physician accoucheur has been compelled, in the multifariousness of his duties, to handle other cases of disease from which it might be barely possible to secure a degree of septic contamination.”

As regards anesthesia, Dr. Will said: “It is not now considered necessary to permit a woman to suffer and become nervous and excited over the so-called ‘nagging’ pains of the first stage of labor any more than those of the later and severer type. On the contrary, it is not considered a mere matter of choice, but of justice and necessity.” He stated that up to this time, chloroform had been most freely used but that he had substituted the so-called A.C.E. mixture of alcohol, chloroform and ether in the ratio of 1, 2 and 3 parts. Chloral hydrate was also used and preferred by many, except during the last expulsive pains of labor. He felt, however, that this was more uncertain, too enduring in its influence, and positively unsafe; he had witnessed two deaths presumed to be from its use. It was his opinion that the chasm between the advocates and opponents of the use of anes-

thetics in labor, which had been both wide and deep, had disappeared. Regarding the administration of chloroform or the A.C.E. mixture he had this to say: "The administration of chloroform should not be carried to complete anesthesia. Just enough should be given to modify the pain—not enough to produce unconsciousness. It is a pretty safe rule to pour a little chloroform on a sponge and give it to the patient herself to inhale a little whenever she feels the pain, the sponge dropping from her hand if she gets too much. The time for its use is at the beginning of the expulsive pains, when they become severe, and its exhibition should cease immediately upon expulsion of the head."<sup>15</sup>

What seems to have been the first mention of a case of air embolism in Illinois is described thus: "A young physician of our city, of the homeopathic persuasion, and possessing perhaps somewhat above the average intelligence of his 'school,' undertook to assist dilatation of the uterus in a case of confinement by the use of Barnes's dilator. The latter was introduced presumably in the proper position, and pumped full of air. In a few minutes the woman gave evidence of asphyxia, and soon expired. Upon withdrawal of the instrument it was found to have burst during the process of distention. The case was subsequently made the subject of a coroner's inquest, at which was taken the evidence of the attending and other physicians, together with that of the husband and neighbors of the deceased, who were present at the time of the operation and death." The following is self-explanatory and for that date was highly instructive: "Being called upon by the coroner March 12, 1889, to perform an autopsy<sup>16</sup> upon the body of Mrs. Angenora Opdycke, at the vault in Springdale cemetery, we found that the deceased had been dead some four or five days, decomposition having set in. Upon opening the abdominal cavity, we found that the uterus contained a male fetus, apparently at full term, the placenta partially detached from the walls of the uterus, and two or three coagula of blood. Presentation normal, and all the pelvic organs free from any evidence of disease or injury, and that death was caused by the introduction of atmospheric air into the uterine sinuses." This was signed by D. W. Magee, M.D., and J. D. Furry, M.D.

The coroner's jury reported: "After hearing the report, testimony, and opinions of several physicians, we cannot find that any blame attaches to the doctor. At the same time, taking into consideration the fatal results in this case, we are inclined to condemn the use of this dilator when expanded with air."

<sup>15</sup> It would seem that history is repeating itself and that the newest importation from England is not at all new to Illinois. There is a trend at present toward the use of trilene administered by the patient with a specially devised mask which falls away as soon as the patient begins to get too much anesthesia.

<sup>16</sup> This was one of the early autopsies in Illinois.



That the idea of the use of prophylactic forceps was not new is attested by this statement from Dr. Will in 1889: "As to the use of the forceps in ordinary labor, my sentiments and practice, as those of the age, are reflected in the *Clinical Reporter*: 'It should be graven on the mind of every practitioner that the forceps is always permissible in the second stage of labor if the expulsive efforts of nature have from any cause ceased. When the first stage of labor has terminated, the os being fully dilated, the membranes ruptured, and no complications present, as tumors, cicatrices, etc., it should be borne in mind that any delay in the process of delivery is dangerous. If the delay be caused by inertia, impaction or exhaustion, the complication and danger are increased with each moment that the use of the forceps is neglected.'"

A sidelight on the practice of the time appears in this report of Dr. Will. It was his practice to use forceps to prevent the too rapid extrusion of the head over the perineum at the end of the second stage, and he said: "I do not believe it possible for any accoucheur to properly judge of the pressure on, and thoroughly protect, the perineum, without having it in sight. This is an essential point in the treatment for the prevention of lacerations. Whether the patient be in the lateral or dorsal position, the clothing being slightly raised on one side permits the necessary observation. The patient is rarely aware that this is done, and if she is, does not object when she knows for what purpose it is done." Thus it is seen that the old custom of delivering women under a sheet to protect their modesty was still practiced in a modified degree in Illinois as late as 1889.

#### 1890—1900

In 1890, Dr. L. A. Molone, reporting on gynecology, indicated that medical writing on this subject had recently been greatly stimulated and that it had been estimated that about 18 articles a week appeared in the literature. He felt that few surgeons had the courage to report failures, and he cited one man who had 14 fatal ovariectomies before his first successful one. Similar results had followed other gynecologic operative procedures. What may be regarded as the first case of endometriosis of the abdominal wall was reported as a case of vicarious menstruation in a woman who bled each monthly period from the scar of a laparotomy wound following removal of an ovarian cyst. The explanation of this phenomenon given by the doctor reporting the case was that probably a portion of the fallopian tube had been caught in the abdominal scar and that some of the menstrual blood escaped thus at each period.

Dysmenorrhea was treated by dilatation of the cervix with good results in 11 out of 13 cases.

Dr. Molone advised careful observation in cases of pelvic abscess and

that the proper time be selected for their evacuation. It was pointed out that the majority would evacuate themselves through the rectum.

The operation for the correction of anteversion of the uterus was being superseded, but the Alexander operation for retroversion was still frequently performed. Molone felt that it was too soon to judge of this operation's true merit. Ventrofixation of the uterus was being done here and in Europe, and the round ligaments were being shortened by plication. The Emmet trachelorrhaphy operation was coming in for severe criticism by foreign gynecologists and two fatal cases were cited. Fibroids were being treated both by surgery and electricity. In most cases where surgery was used, the cervical stump was left in situ. Cancer of the uterus was being attacked surgically and a great battle raged between the advocates of high amputation of the cervix and vaginal hysterectomy.

A strong feeling was expressed at this time against unnecessary operations for removal of tubes and ovaries for minor gynecologic complications. "There is scarcely a hamlet in the United States where there may not be found at least one who has opened a woman's belly and erected a tombstone to the memory of his daring." In discussing this wave of conservatism, Molone said: "Even the New York Obstetrical Society, which has set its seal of approval upon more peculiar and unnecessary mutilations of women than any other similar organization in America, at a stated meeting November 9, 1889, had a lucid interval in which a halt was called and word-wrangling for conservative priority was indulged in by its members." The medical journals of the period also carried similar critical editorials.

Dr. J. S. Miller of Peoria in 1890 stated before the State Medical Society that before antisepsis, lying-in hospitals were regarded with disfavor, and the desirability of closing them by legislation was seriously considered. After antiseptic precautions were introduced, women were found to be much safer when delivered in lying-in hospitals than elsewhere—a dramatic event in medical history.

The Lister spray had been abandoned, as were antiseptic douches during labor. Chloroform was used as an analgesic with very good results and could be pushed to complete narcosis, if necessary. Only one case was found where death could be ascribed to the anesthesia. Hypnotism was being practiced in France in a few obstetrical cases, but no one reported similar cases from Illinois. This indicated the conservative attitude of the profession of that day towards hypnotism and it has persisted even to the present time.

Ergot used to stimulate contractions antepartum was mentioned only to be strongly condemned. Views have not changed in this respect.

With the beginning of the early 1890's the development of many modern concepts of management of obstetric complications appeared. Dr. Christian Fenger had come to Chicago, bringing with him a knowledge of the basic

pathology of obstetric and gynecologic complications. These he freely disseminated by precept and example to the medical men, undergraduate as well as graduate, with whom he came in contact. In 1891, he presented to the Illinois State Medical Society a masterful description of a case of advanced abdominal extra-uterine pregnancy. The relationship of previous genital infection and the symptoms of early fetal abortion was pointed out, and the pathogenesis of the symptoms presented as the pregnancy progressed in its development. The false labor which occurred at or near term followed by the death of the fetus was described. He pointed out the period of waiting to allow the placenta to atrophy after death of the fetus and the danger of too radical attempts to remove the placenta as opposed to marsupializing the sac and allowing the placental tissue to autolyze and come away piecemeal. The prognosis, as regards mortality, varied between 42 per cent and 88 per cent up to this time, but if only the cases reported since 1886 were included, the mortality rate had been reduced to 17 per cent by early diagnosis and operation. Failure to operate until some time after death of the fetus to permit reduction in placental circulation resulted in secondary infection of the sac from the bowel and secondary perforation of the intestinal wall, with subsequent peritonitis when operation at a very unfavorable time would be imperative as a life-saving measure. Fenger concluded that, all things being considered, the sooner a patient with ectopic pregnancy was operated upon after the diagnosis was made, the better off she would be. The leading text books on obstetrics today (1954) express the same opinion.

In 1892 Dr. Ellen H. Heise of Canton described the conduct of labor, particularly in regard to care of the perineum in the second stage. She emphasized the dangers of a too rapid second stage but admitted that in desultory labor, gentle manual dilatation might be permissible. Episiotomy was advised in rare cases to save tears in the marginal integument of the vulva followed by laceration of the underlying muscles and fascia. (This is the first mention of this procedure which I have found.) Dr. Heise believed in supporting the perineum at the height of the pains, but decried the practice of introducing the finger into the rectum to aid this support as being "uncleanly and repugnant." Women were just then beginning to assert themselves in the special field of obstetrics and were invited to present papers on the subject before the State Medical Society.

An idea of the prevailing practice of the time in Central Illinois is gained from Dr. Thomas J. Whitten's paper on "Management of Labor" presented in 1892. He stated that, if practicable, the physician should be engaged in advance of the onset of labor and that if there was very marked edema of the feet and limbs or puffiness about the eyes, the urine should be examined for albumin. Apparently, otherwise there was no prenatal



care. If albumin was found, no mention was made of restriction of sodium but a teaspoonful of equal parts of potash bitart, jalap and sulfur was given once every three hours until the bowels acted freely, to be followed with acetate of potash and digitalis. If the patient was anemic, tincture of iron was recommended. From this it is seen that Dr. Whitten had begun to appreciate the value of prenatal care in toxemia; that he had selected remedies which we could endorse today, and that even in rural areas the beginnings of specialist care for pregnant women were becoming apparent. He pointed out that chloroform was the anesthesia most frequently used, but that ether, ethyl bromide and nitrous oxide gas were also administered. "These agents," said Whitten, "should be given by a person familiar with their use (anesthetist) who can give his full attention to the patient" and he strongly urged that anesthesia be stopped immediately on any appearance of heart failure or suspension or irregularity of breathing. Anesthesia was contraindicated in cardiac dilatation, fatty heart, diseases of the kidney, acute lung disease, if labor was complicated by vomiting, or when tendency to hemorrhage had been observed in previous labors. It was felt that patients should not be brought under deep anesthesia except for operations. Dr. Whitten noted that "the recent deaths of women in labor would not have occurred in all probability if the advice here given had been followed by modern medical men." O tempora; O mores! He further stated that the application of forceps was much more common than previously due partly to a better knowledge of the anatomy, but that "in most cases their use can be ascribed to a desire to save time for the physician which latter reason is not to be recommended." He felt that the teaching of one prominent teacher who advocated the use of forceps in one-third of all cases was not only wrong but was responsible for much injury to mothers and fatal to many babies. He thought there would be a reaction from such dangerous teaching, and there was. His management of the third stage of labor is excellent by our present standards. Here again was a country doctor studying the problems of obstetrics independently and criticizing the teachings of an urban professor. Who is there to say that he was not a specialist, and a good one at that?

Again in 1893 Dr. O. B. Will presented another paper before the State Medical Society, this time on catheterization of the fallopian tubes. He had performed this procedure repeatedly on one of his patients with a probe which had a bulbous tip and which was sufficiently malleable to be bent to conform to the shape of the interior of the fundus. This was inserted through the cervix. By manipulation at the cornua of the uterus he was able to catheterize the tube without discomfort to the patient either during or after the manipulation. He claimed to have treated discharges from the uterus by this method, injecting hydrogen peroxide into the tube when

the catheter was in place. The significance of these observations lies in the fact that this country doctor discovered a fact which was denied by the leading authorities of his time, and that he had the courage to publish his experience. The therapeutic value of the procedure may be questioned, but not the accuracy of his observations.

Maternal impressions at that time were thought by the laity to have a strong influence upon the development of various deformities and blemishes in the newborn. Dr. M. P. Hatfield pointed out that the alleged evidence on which these claims were based was unscientific and could not stand close scrutiny. His views have stood the test of time and these old deep-rooted superstitions, although still with us, are rapidly fading from the minds of even the more ignorant of the laity.

In 1895 Dr. Will presented before the State Medical Society a classical paper on diagnosis in gynecology in which he pointed out the dangers of snap diagnoses and the need for careful, meticulous investigation of the pelvic structures by any surgeon charged with the responsibility of recommending major surgical operative procedures. He deplored the tendency to recommend exploratory laparotomy before all other sources of information had been investigated thoroughly in establishing the diagnosis. He strongly advocated a thorough training in palpation of normal pelvic structures and the physiologic changes brought about by such functions as menstruation, ovulation and pregnancy. He pointed out that various tender areas in the pelvis might give rise to pain in that region totally unrelated to the genital organs, and that the discomfort associated therewith persisted after needless surgery. This dissertation can still be read with profit by every student of gynecology.

Of all the obstetricians and gynecologists whose writings appear in the *Transactions of the Illinois State Medical Society*, none has, in my opinion, displayed such keen insight, rare judgment, modesty, independence of thought and scientific fearlessness as this country doctor—Dr. O. B. Will. This is especially noteworthy when one realizes his isolation from other men of the specialty and from medical school contacts and specialty society membership which were common to his contemporaries.

Thus, in résumé, it is seen that the period from 1850 and 1900 was marked by a great advance in the treatment of obstetric and gynecologic patients in Illinois. This advance resulted partly from the establishment of local medical schools which of necessity had to have teachers who had more than ordinary ability and experience, and partly because there were men throughout the state who through special interest, additional training or just good common sense were able properly to evaluate the newer knowledge which was being gradually disseminated through this country

from the medical centers in the eastern United States and from abroad, especially from England, Germany and France.

Bacteriology, pathology and a knowledge of anesthetic drugs did much to round out the medical education of these men and to help them better understand the fundamental problems involved in specialized obstetric and gynecologic cases. As yet, however, the facilities for proper study in these branches were woefully lacking. Proper management in the home had improved but still left much to be desired. Only a few of the more serious and complicated cases were admitted to the hospitals which were not well equipped to care for maternity cases.

While there were no institutions which could be called lying-in hospitals in the state at that time, there were men who knew what should be done to remedy the difficulties and who pointed them out clearly. The fruits of their early efforts were already beginning to be discerned by the end of the century in the form of better educational facilities, better hospitals, and a better understanding of the problems by the nursing profession and the laity.

Stimulated by a common interest, these pioneer physicians banded together to form the first gynecological society in Illinois. By their joint efforts much wheat, as it were, already separated from the chaff, was moving westward from its origin in England, Germany and France and from the large eastern centers of medical education in this country. It was greatly to their credit that in practically every instance, they evaluated new ideas correctly and passed on by their endorsement only those which have proved valuable.

Reading between the lines, we are conscious of the efforts which these early men put forth to found in Illinois schools, hospitals and postgraduate facilities which have compared favorably with the best in the United States. It is significant that they did this on their own time without direct financial remuneration, often contributing money as well as effort to the establishment of what they felt was good for the community and for medicine. We honor and thank them for their accomplishments, and in the words of the immortal Lincoln, "dedicate ourselves to the great unfinished task which they who struggled here have thus far so nobly advanced."



## CHAPTER X

# CONTAGIOUS DISEASES\*

By ARCHIBALD L. HOYNE, M.D.

### INTRODUCTION

TO understand the problem of transmissible diseases in Illinois prior to 1900, it is necessary to note several important facts. In the first place, there appears to have been no special instruction relating to communicable diseases in any of the medical schools; acute infections were grouped together and included with the didactic courses in general medicine, and clinical material was not available, even for a limited number of students. Moreover, an internship was not then required to qualify for the practice of medicine, and physicians often embarked upon their chosen profession without ever having seen a case of contagious disease. Again, there was a total lack of isolation hospitals of any type in Illinois until 1854. At this time a hospital for contagious disease patients in Illinois was built at Rock Island at a cost of \$467.09. An interesting account of this institution is given in "The Doctors' Story," published recently by the Rock Island County Medical Society; the following is quoted from the article: "Called a 'hospital,' it is in reality a pest house for the isolation of patients with highly contagious diseases. The building was large, 25 by 47 feet in area and 12 feet high." In the early days of its existence, cholera was the principal disease for which patients were admitted, but in later years it became a smallpox hospital. Also, near the close of the century, a hospital was built in Chicago for the exclusive care of smallpox.<sup>1</sup>

\* In 1927, the State Department of Public Health of Illinois published *The Rise and Fall of Disease in Illinois*. It was prepared by the then State Director of Public Health, I. D. Rawlings, M.D., in collaboration with W. A. Evans, Gottfried Koehler and B. K. Richardson. This volume contains the history of transmissible and infectious diseases in Illinois together with an analysis, amply illustrated by charts and tables, of all available health data from the advent of the white man up to approximately 1927. Since the State of Illinois has thus made available this comprehensive report together with references to the literature, it seemed adequate in Volume II of "The History of Medical Practice in Illinois" to present the Chapter on Contagious Diseases in an abbreviated form. Dr. Hoyne, who is well qualified in the fields of practical medicine and public health, consented to do this. He graduated from Rush Medical College in 1904. For many years he has been the Director of the Chicago Municipal Hospital for Contagious Diseases. He also has a large consulting practice.—Editor

<sup>1</sup> On page 72 of Volume I of *History of Medical Practice in Illinois* by Zeuch, there appears this statement: Dr. George Fisher "erected a house of refuge on his plantation six miles from Kaskaskia which was the first record of institutional care of this dread

Until the original Medical Practice Act was secured from the Illinois legislature of 1876-77 and signed by Governor Shelby M. Cullom, the reporting of communicable disease was frequently neglected. It was years later that uniform regulations throughout the state were applied to isolation, quarantine and other measures respecting the public health. In the meantime, cities and towns were fortunate to have a single health officer, even if he served only part time.

Without sanitary engineers, it is little wonder that Illinois during this period had violent intestinal epidemics, for example the cholera epidemic in 1866, and that frequent typhoid fever and "summer diarrhea" outbreaks in children were common occurrences throughout the century. Although apparently the profession recognized a relationship between sanitation and the prevalent gastro-intestinal diseases, the *Transactions of the Illinois State Medical Society* published only eight papers on public health during a period of 50 years. Among the earliest to report were Drs. E. P. Cook and J. C. Corbus of Mendota on scarlet fever (1870); Dr. Samuel J. Birney of Urbana on rubeola and scarlatina (1876) and on measles (1881). Dr. Charles W. Earle of Chicago wrote a paper on "Prevailing Epidemic-Rotheln" (1881); he continued to display an intense interest in contagious disease problems for years, and in 1892 read a paper on typhoid fever in infancy at a meeting of the American Pediatric Society, reporting 21 cases from Chicago. This was of special interest to the profession because, prior to that time, it had been contended by some that typhoid fever did not occur in individuals under two years of age. Dr. F. M. Casal of Pittsfield reported on measles (1881) and Dr. W. J. Chenoweth of Decatur presented a "Report on the Prevention of Epidemics" (1883). There seem to have been only two papers relating to infantile paralysis published in the *Transactions* during this period; one was by Dr. Daniel R. Brower, neurologist of Rush Medical College and a practitioner in Chicago, and the other was by Dr. W. J. Eddy of Shelbyville; both articles were presented in 1892. Dr. T. D. Fitch of Chicago wrote on the "Treatment of Membranous Croup" (1878) and Dr. Christian Fenger, the well-known Chicago surgeon, discussed tracheotomy in diphtheria in 1880, three years before the discovery of the Klebs-Loeffler bacillus and five years before intubation of the larynx was devised by O'Dwyer of New York. Dr. J. M. G. Carter of Waukegan, a man with an extensive practice, was one of the early competent physicians interested in typhoid fever and malaria; he discussed both of these diseases often in the 1890's.

During the period 1850 to 1900, the place of preventive medicine in the

---

malady (smallpox) in Illinois. . . . This isolation with the aid of vaccination seems to have stopped the spread of the disease." Dr. Fisher died in 1820.—*Editor*

field of public health had scarcely been touched. While aerial transmission of infection among the so-called common contagious diseases seems to have been accepted as an undisputed fact, no mention of medical aseptic technic in the prevention and control of acute infectious diseases is found in the literature of the time. Smallpox was the only disease against which it was possible to establish an artificial active immunity. Even so, there has never been a compulsory vaccination law in the State of Illinois, and long after 1900 there were still many people who apparently chose smallpox in preference to vaccination. Nor was there any law then which required the use of silver nitrate in the eyes at birth to forestall the possibility of ophthalmia neonatorum. The number of children who lost their sight in those days will probably never be known but it was considerable.

Looking back through the years when contagious diseases ran rife, it is not so surprising that the death rates were high as it is remarkable that so great a percentage of children reached adult life.

#### EPIDEMIC DISEASES

Active immunization against *diphtheria* did not come into general practice until many years after Theobald Smith, Chief of the United States Bureau of Animal Industry, reported on his studies in immunity. In the meantime, diphtheria continued to be one of the chief causes of death in children. At times entire families were wiped out by it. Fatality rates often ranged from 40 per cent upward. Diphtheria antitoxin was not discovered by Behring until 1890 and was not freely available in Illinois before 1900.

From time to time during the last century, *scarlet fever* occurred in waves of virulent and mild epidemics. After a prolonged quiescence early in the century, the virulent form appeared in 1830. It continued for more than 40 years to be one of the leading causes of death in children, and for more than 25 years into the 20th century it still continued to present many serious problems.

Before 1900, the etiologic factor in scarlet fever was a matter of dispute. When it was finally recognized that streptococci were constantly present in the disease, the contention was that these organisms accounted for the complications but were not responsible for the original infection; that they were, in fact, secondary invaders. Not until the work of Drs. George F. and Gladys H. Dick in 1924 in Chicago was a specific hemolytic streptococcus conclusively established as the causative agent of scarlet fever.

Toward the close of the nineteenth century, kidney and heart complications in scarlet fever were greatly feared. Suppurative otitis media occurred in at least 14 per cent of the cases and was frequently followed by mastoiditis and death. Lateral sinus thrombosis and at times meningitis also



led to a fatal outcome. Gangrene of the extremities was rarely encountered, but suppurative cervical adenitis was a common complication. Thus, patients who survived scarlet fever were sometimes left with damaged hearts or kidneys and not infrequently with defective hearing.

Treatment of scarlet fever before 1900 was symptomatic. The necessity for isolation or quarantine was recognized. Although terminal fumigation of the premises was required, there was no uniform period for such regulations. The time usually varied from 4 to 6 weeks in Illinois. When a placard was posted on a home to indicate quarantine, it was one of the rules in Chicago, even after 1900, that desquamation must be complete before that warning sign could be removed. Many believed that scarlet fever was most contagious during the peeling stage and failed to recognize that the chief reservoirs of infection were the nose and throat.

After isolation or quarantine procedures for scarlet fever, diet received most consideration. Often the first question asked by the mother of a patient was: "What can I give him to eat?" Almost invariably the physician's reply would be: "Nothing but milk." This advice was in keeping with Osler's teaching before 1900, the purpose of the diet being to lessen the likelihood of a complicating nephritis, which was so generally feared. In reality, it was not a prophylactic for any such purpose, as was proved some years later.

Prior to 1870, fatality rates for scarlet fever were often 10 per cent or higher, but since that year there has been a progressive decline.<sup>2</sup> There seems to be no doubt that nutritional gains in the general population, pasteurization of milk, advancement of sanitary measures and progress in preventive medicine all have played an important part in the suppression of scarlet fever and other streptococcic infections. Only the future can tell whether there will be another wave of virulent streptococci to account for a malignant type of scarlet fever, such as has occurred in the past. A great period of depression with less nourishing food, lower standards of sanitation and a marked lowering of the scale of living in general could contribute to such a misfortune.

While the first epidemic of *poliomyelitis* was reported in this country in Louisiana in 1843, the disease does not seem to have occurred on a large scale in Illinois prior to 1900. It is quite likely that many cases were not reported and others were unrecognized.

It was not until 1882 that the tubercle bacillus was discovered by Koch and an intensive war on *tuberculosis* in this country did not get under way

<sup>2</sup> In this connection it may be mentioned that during the first quarter of the 20th century, there was a reduction in the death rate for scarlet fever in the United States of more than 60 per cent. This improvement took place before sera, sulfonamides or antibiotics were available.—Editor

until well after 1900. In the meantime, in Illinois as elsewhere, many patent medicines—often at one dollar a bottle—were offered as cures for this disease, and the United States Pure Food and Drug Bureau had not yet come into existence to curb such quackery.

In some areas of Illinois, *typhoid fever* and *malaria* ran rampant. The high incidence of typhoid fever was due largely to inadequate sanitary measures. Out-houses and contaminated water supplies accounted for most cases. Unpasteurized milk and carriers often contributed to the spread of the disease in cities, although the water supply was often at fault. An example of the havoc wrought by typhoid fever generally in those times is prominent in the records of the Spanish-American War (1898) when there were 20,000 cases among our troops in contrast to 350 battle casualties. Antityphoid vaccine was not developed by Wright until 1896, but it was not applied in the above mentioned war.

All forms of *meningitis* were almost invariably fatal during this period. Regardless of the causative agent, the disease was usually referred to as cerebrospinal fever, for Weichselbaum did not discover the meningococcus until 1887. Moreover, there was no specific treatment until after Kolle and Wassermann (1905) and Joachim (1906) developed their antibacterial sera, which Flexner improved in 1907.

It has been estimated that in the larger communities, about 44 per cent of children have *whooping cough* before they reach the age of five years. While this fact establishes the infection as one of importance, there are other reasons. Whooping cough differs from most of the common contagious diseases in that the infant may be attacked at any time after birth. Because of the insignificance formerly attached to whooping cough, comparatively few cases were reported and, if pneumonia developed as a complication and death ensued, it was likely that no record of pertussis was disclosed. Therefore, the statistics in regard to the prevalence and mortality of this disease are incomplete and unreliable.

The etiology of whooping cough was a matter of dispute for many years. Some believed that it was a neurologic disorder or possibly of viral origin; others thought that an ulcer beneath the tongue was responsible for the paroxysms. In 1905 Bordet-Gengou discovered the *Hemophilus pertussis* as the specific etiologic agent.

A multitude of remedies was used for treatment of the condition, and even continued to be prescribed after the true nature of this disease was scientifically determined. Although a prodigious variety of cough mixtures was considered beneficial, quinine seems to have led the field in the choice of drugs prior to 1900, and some physicians seemed to look upon this remedy as specific. In spite of all claims, actually little of value was done either to prevent or treat pertussis during the 19th century.

Before the end of the 19th century, measures for the control of the common contagious diseases were largely ineffective. Chief reliance was placed on quarantine which, as a rule, was totally inadequate. Treatment for the most part was symptomatic: confinement to bed, laxatives or cathartics, and fever prescriptions, which were likely to include quinine, seemed to be customary measures for any or all acute contagions. Special stress was placed on the value of calomel early in the treatment. For patients with throat infections, including scarlet fever, diphtheria and measles, a flax seed poultice about the neck was popular for alleviating symptoms. Camphorated oil was commonly used as a remedy for pneumonia and also for "membranous croup;" usually the oil was rubbed on the chest and then covered with a flannel bandage. For some of the eruptive diseases, patients were placed in warm baths, and then removed and wrapped in blankets for the purpose of "bringing out the rash."

The health of the nation as a whole was reflected in the situation as it existed in Illinois. The transmissible diseases, with the exception of smallpox, were practically uncontrollable because there were no methods for active immunization and because sanitary measures for prevention had not yet been developed. Morbidity and mortality rates for the contagious diseases often reached great heights. But the progress in every field of medicine which was to be made in the years ahead would never have been possible without the basic foundations laid by the men of science during the last half of the 19th century. This is emphasized by the remarks of Simon Flexner in 1938 in an address entitled "A Half Century of American Medicine" in which he singled out the years of 1880 to 1890 as "the most wonderful" for the following reasons: In 1880 Laveran discovered the malaria parasite; Koch in 1882 discovered the tubercle bacillus, Klebs in 1883 the diphtheria organism, and Pasteur in 1885 developed rabies vaccine. Ross demonstrated the mosquito as the vector of malaria in 1898, and Reed found that yellow fever was transmitted in a similar manner. Specific methods of prophylaxis for common contagious diseases did not come into practical use until after 1900.



## CHAPTER XI

# PEDIATRICS

By ARCHIBALD L. HOYNE, M.D.\*

THE first mention of special instruction in diseases of children in Illinois appeared in the published announcement (about 1843) that Dr. Moses L. Knapp had been appointed Professor of Obstetrics and Diseases of Women and Children at Rush Medical College.

Prior to 1900 there was a dearth of physicians who confined their practice to pediatrics because it was customary for obstetricians to include the care of infants and children in their special field of medicine. That such an arrangement was to be expected was clearly shown by the titles of the faculty members in the early days of the medical schools. The appointment as professor of obstetrics and diseases of children was not at all unusual, even up to the turn of the century.

Until 1890, the number of hospitals in the smaller cities and towns was comparatively few, and accommodations for the care of patients, even in Chicago, were often crude. Hospitals then did not possess the confidence of the public. Furthermore, it was many years before general hospitals established departments or wards designated solely for the care of infants and children. As a rule, mothers were delivered at home and were expected to nurse their babies at the breast and not by means of a bottle, if the latter method could possibly be avoided.

### PEDIATRICS IN HOSPITALS

The Chicago Hospital for Women and Children was established in 1865 by Mary Thompson and at one time bore her name; she was a diligent worker for the betterment of mothers and their children. The hospital, with facilities for 14 patients, is believed to have been the first institution in this country specifically designed and set apart for the treatment of children. Its primary objective was the care of widows and children of Civil War Veterans.

In 1884 Mrs. Julia F. Porter founded the Morris Porter Memorial Hospital in memory of her son. At that time it could accommodate 30 patients.

\* Dr. Hoyne has for years served as a consultant in pediatrics at several hospitals, including Cook County Hospital. His work in pediatrics has been closely allied with the field of contagious diseases. The reader, therefore, is referred to Chapter X of this volume for correlation of the two fields.—*Editor*

In 1903 the name of the institution was changed to Children's Memorial Hospital.

In the beginning, the capacities of each of these worthy undertakings were extremely limited, but the foresight displayed and the unselfish enthusiasm put forth in behalf of both projects were forward steps which should not be forgotten in the history of pediatrics in Illinois.

Dr. Isaac Abt's description of the Children's Ward in Cook County Hospital is a picture of pediatrics in general during the 1850-1900 period. The ward was established about 1885. "The main floor of the ward accommodated the older children while a sort of balcony or mezzanine floor was reserved for the infants. . . . The section was not particularly well adapted for their welfare or their hygienic care. The ventilation was poor; cross infections were a common occurrence and the management of the ward strikingly defective. . . . No special precautions were taken to prevent house infections or for securing the proper milk supply or for its preparation for infant use." The infant death rate was very high, due chiefly to diarrhea or pneumonia or both.

The writer, when a medical student after 1900, visited the Children's Ward at the Cook County Hospital and has a vivid recollection of its unsanitary and unclean appearance. Had it not been for the contagious disease patients it might properly have been designated a pest house.

In 1890, Michael Reese Hospital set aside a ward of 12 beds for the exclusive care of children. Many of the private general hospitals, however, were slow to take this step. Even in the late 1890's, the pediatric departments of most of the large hospitals provided only a small number of cribs because the daily census for children was frequently insignificant. It should be remembered that during this period the laboratory procedures routinely performed were limited to urinalyses and blood counts; blood transfusions and intravenous fluids were given rarely and only in the face of impending death. A similar situation existed in respect to the administration of oxygen, since the oxygen tent had not yet come into general use. Lumbar puncture, which was introduced by Quinke in 1891, was rarely heard of in Illinois during the next ten years, and Roentgen did not discover the x-ray until 1895. Even blood pressures were seldom obtained. Under these circumstances, parents commonly felt that there was nothing to be gained by having a child hospitalized unless surgery was indicated.

Special nurseries for the newborn were equipped with few of the facilities adopted in later years. In the care of infants more attention was given to the antiseptic methods introduced by Lister in 1865 than to medical asepsis. After the establishment of children's wards and institutions for their care, there was constant fear of the possibility of epidemics of vulvovaginitis which at that time were not infrequent. Gonorrheal infections sometimes

occurred and often persisted for several months before recovery. Outbreaks of impetigo also were not infrequent, nor was it unusual to have cases of diphtheria, scarlet fever or other contagious diseases develop in children's wards. However, gastrointestinal disturbances and pneumonia accounted for most pediatric deaths.

#### NUTRITION IN PEDIATRICS

Before 1900, scientific methods for artificial feeding of infants had made little progress and nutritional diseases were numerous. Rickets was common, and scurvy was not infrequent up to the end of the century. There were no infant welfare societies and school children with adenoids, enlarged tonsils, anemia and sometimes tuberculous glands of the neck were not at all unusual. There was as yet no tuberculin testing of children, nor were there sanatoria for those who should have had institutional care. While growth and development of his crops were recognized as prerequisites for the successful farmer and similar aims were foremost in animal industry, comparable attention to the rearing of children did not appear until near the close of the nineteenth century.

Substitutes for breast feeding passed through a long stage of experimentation, during which there was much disagreement among physicians. Raw cow's milk, condensed milk, boiled milk, certified milk and pasteurized milk were recommended. Goat's milk also had a short period of popularity later. Evaporated milk and irradiated milk were unknown in the nineteenth century.

During the years when there was no pasteurization of milk, water supplies also were unprotected and artificial feeding of infants was to a great extent a haphazard procedure. Moreover, outside of large cities, out-houses were not uncommon and, when not strategically located, drained into the wells from which the family obtained their drinking water and the water with which they washed their milk cans.

Since growth and development are dependent on normal nutrition, the proper feeding of infants is undoubtedly the most important objective of the pediatrician and one of the principal factors in extending life expectancy. The scientific discoveries in the field of food and milk bacteriology during the last half of the 19th century and the paths of progress for improvement in sanitation formed the framework for the monumental achievements in the century that followed. To understand this we should speak of Louis Pasteur, who was the "father of bacteriology." His famous studies on fermentation and the solid foundation he established for the germ theory have had a profound effect on the entire world. His accomplishments were directly beneficial to the health of mankind, and especially to children. To those engaged in pursuits on which their liveli-



hood depended, such as the wine producers of France and the dairy interests throughout the world, he contributed greatly. His researches on chicken cholera, anthrax and rabies were of scientific and lasting significance.

In Illinois the name of Pasteur is most commonly associated with milk. Prior to 1900, pasteurization of milk in Illinois was an unusual procedure. There were no laws which required that all milk be pasteurized, and there was no routine health inspection of dairies. Pasteur's discoveries of pasteurization and sanitation formed the anchor posts necessary for progress in the field of pediatrics in Illinois as elsewhere soon after 1900.

#### PERTINENT BIOGRAPHIC SKETCHES

George Elias Shipman (1820-1893) was the first pediatrician, as we understand the term today, to practice in Illinois. He attended Middlebury Medical College in Vermont and graduated from the University of New York in 1830. Later he adopted homeopathy after some time spent in Europe. In 1871, the year of the Chicago fire, he organized the Chicago Foundling Home.

Edward Oscar Fitzland Roler (1833-1907), a native of Winchester, Virginia, was graduated from Rush Medical College in 1850. In 1886 he was made Professor of Obstetrics and Diseases of Women and Children at the Chicago Medical School (later Northwestern University).

James Snyder Knox, a graduate of the College of Physicians and Surgeons in New York, came to Chicago in 1873. He joined the Faculty of Rush Medical College and eventually became Professor of Obstetrics and Diseases of Children. Following his death in 1892, pediatrics was established as a separate department at Rush.

Charles Warrington Earle (1845-1893) was born in Westfield, Vermont. A veteran of the Civil War, he received his medical degree from the Chicago Medical School (Northwestern University) in 1870. In 1881 he was one of the founders of the College of Physicians and Surgeons (now the University of Illinois). He became Professor of Diseases of Children in the Women's Medical College, Chicago. One of his special interests was typhoid fever in infants and children. He contributed to pediatric literature and participated in many programs of the Illinois State Medical Society.

Alfred Cleveland Cotton (1847-1916) seems to have been the first Illinois pediatrician of prominence who was born in the state, his native town being Griggsville, Illinois. At the age of 16, he was a Civil War volunteer. He graduated from Rush Medical College in 1878. Four years later he came from his home town to Chicago, and in 1888 was made Adjunct Professor of Therapeutics at Rush. In 1892, he was named Head of the Department of Pediatrics at Rush, when that department was established as a unit separate from the Department of Obstetrics. At the same time Dr. Cotton

was appointed attending physician to the Presbyterian Hospital which was then closely associated with Rush and supplied much of the material for clinical teaching. He contributed to the literature on the care of infants and also wrote on the child's developmental period. Because of his rather large head and heavy growth of long bushy white hair, his name seemed appropriate!

Marcus Patton Hatfield (1849-1900) graduated from the Chicago Medical School (Northwestern University) in 1872 and spent the following year studying in Europe. From 1881 to 1896 he was Professor of Diseases of Children at his alma mater. Dr. Isaac Abt stated (The Growth of Pediatrics in the Chicago Area, *Medical Clinics of North America*, January 1946) that Hatfield was the first Professor of Pediatrics in any of the Chicago medical schools. He was also one of the founders of Wesley Hospital, a member of the American Pediatric Society and the author of several books, including one on "Acute Contagious Diseases of Childhood."

Frank E. Waxham (1853-1911) came from Indiana and graduated from the Chicago Medical School in 1878. He was the first Professor of Diseases of Children at the College of Physicians and Surgeons (University of Illinois) when that school was established in 1882. Later, about 1888, he changed to the Department of Otoloty, Laryngology and Rhinology. Waxham, in 1885, is said to have been the first in Chicago to perform the operation of intubation which had shortly before been devised by O'Dwyer in New York. A mouth gag commonly used during the operation bore Waxham's name in later years. Eventually he moved to Denver and became associated with Gross Medical College.

Walter Shield Christopher (1850-1905) was a Kentuckian who graduated from the Medical College of Ohio in 1883. He came to Chicago in 1891 and a year later was made Professor of Pediatrics at the College of Physicians and Surgeons (University of Illinois). While a member of the Chicago Board of Education, he was instrumental in bringing about medical inspection in the public schools. Dr. Christopher was an attending physician at Children's Memorial Hospital and contributed many papers to pediatric literature. In 1894, while Chairman of the Section on Diseases of Children of the American Medical Association, his address was entitled "Pediatrics as a Specialty." He was a member of the American Pediatric Society and its President in 1902. There probably was no one in his day who was more active in the advancement of pediatrics in Illinois.

Frank Spooner Churchill (1864-1946) was born in Milton, Massachusetts. He graduated from the Medical School of Harvard University in 1890. Following his internship at the Massachusetts General Hospital, he came to Chicago in 1892 and was made Associate Professor of Pediatrics at Rush Medical College where he continued to teach until 1906. He was visiting physician to Cook County Hospital and attending physician to

Children's Memorial Hospital. Among his principal interests were infant welfare problems and a pure milk supply.

John Milton Dodson (1859-1935) was born in Berlin, Wisconsin, and graduated from Rush Medical College in 1888. From 1894 to 1897 he was Professor of Pediatrics in the Women's Medical College of Northwestern University. During 1896 he did postgraduate work in Germany. From 1889 to 1899 he taught in various departments at Rush before becoming Professor of Pediatrics, a position he retained until near the close of his life. In addition, he was Dean at Rush for many years, and his administrative duties were particularly heavy at the close of the century when arrangements were being made to transfer the first 2-year students to the University of Chicago and to confine the last two years to clinical work at Rush. This plan made possible an eventual extension of pediatric teaching at Cook County Hospital where there was an abundance of material for the purpose. The plan became effective in the fall of 1901 when the first class of Rush students registered at the University of Chicago. Dodson always displayed a deep interest in the students and their problems. Even in the days when medical students were a "rough set," there were few unkind words ever uttered about "The Dean."

Samuel Johnson Walker (1867-1924), a native of Covington, Kentucky, received his medical degree from Northwestern University Medical School. He held an appointment as Associate Clinical Professor of Medicine at Rush Medical College but was primarily interested in diseases of children. In his later years (1904-1919), he was President of the Medical Staff of Children's Memorial Hospital.

Although very few of his many years of activity passed before the beginning of the 20th century, Dr. Isaac Arthur Abt deserves to be mentioned in this history. Dr. Abt was born in Wilmington, Illinois, in 1867. He graduated from the Chicago Medical College (Northwestern University) in 1891 and then served a two year internship at Michael Reese Hospital. During 1893 and 1894 he did postgraduate work in Vienna and Berlin. From 1899 to 1901, just prior to joining the faculty of Rush Medical College, he was Professor of Diseases of Children at Northwestern University Women's Medical School. Through the years he wrote many scientific papers as well as numerous monographs pertaining to diseases of children. He was Editor of Abt's *System of Pediatrics* which was widely and favorably received. For more than forty years he was Editor of the *Yearbook of Pediatrics* and was largely responsible for its popularity. As a pediatrician he became known the world over and has received high honors both abroad and at home. Possessed of a kindly manner, he was an excellent teacher, revered by all his students. Throughout his long life he has maintained these fine traits of character.



## CHAPTER XII

# OPHTHALMOLOGY

By WILLIAM A. MANN, M.D. \*

THE year 1850 is probably the most significant date in ophthalmology, as in that year the gifted German, von Helmholtz, invented the ophthalmoscope. This opened the hitherto unexplored region of the interior of the living eye to exact study and diagnosis, and elevated ophthalmology from its former unscientific and empirical status to a new and flourishing specialty, destined for exciting and important advances in the fifty years between 1850 and 1900.

### RISE OF OPHTHALMOLOGY IN ILLINOIS

It cannot be said that many great ophthalmological discoveries originated in Illinois in the 1850-1900 period, but it is interesting to note how quickly advances made elsewhere were recognized and adopted here. This came about not only through careful study of the literature, but through frequent trips to other centers in America and especially in Europe. Midwest medicine was conscious of its deficiencies and sought to remedy them by European study.

Dr. Samuel Gross reported to the First International Ophthalmic Conference in Brussels in 1857 that, in the interior of the United States, eye diseases were neglected or treated by quacks. About this period, however, Dr. Edward L. Holmes, trained in ophthalmology and otology, was attracted to Chicago, decided to locate there, and from that time on, ophthalmology began to have a firm footing in the State of Illinois. Dr. Holmes, qualified and energetic as he was, may be said to be the ophthalmic pioneer who blazed the trail for future generations, especially in the Middle West.

The progress of ophthalmology in Illinois may be followed through the transactions of the Illinois State Medical Society. Indeed, this becomes the principal source of information as to the nature of ophthalmic practice for the entire period, since records of the meetings of the Chicago Ophthalmological Society prior to 1900 have been lost. At the meetings of the

\* Dr. Mann is a well-known practitioner and consultant in ophthalmology in Chicago. He has taken a keen interest in the history of his specialty and is an active member of the Committee on Medical History of the Illinois State Medical Society. He is a graduate of the University of Illinois College of Medicine and at present is on the faculty of Northwestern University Medical School.—*Editor*

State Medical Society, papers on every branch of medicine were presented, since specialization was in its infancy and most physicians were obliged to treat every variety of condition.

Dr. Holmes appears to have been the most active ophthalmologist in the Society's activities for many years. If he was not the chairman of a special or standing committee on ophthalmology, which was usually the case, he appears to have been the man who gave the annual report. Through his reports and papers—of which he gave some thirteen on the eye—one can follow the progress of this special field.

It is interesting to note that at the meeting of the State Society in 1852, the attention of the Society was called to the following advertisement:

DR. J. W. HALSTED, OCULIST

Residing at La Fayette, Stark County, Illinois, would respectfully announce to those afflicted with diseased eyes, whether of recent or long standing, that he is fully prepared to treat all such cases with the utmost care and attention. From his knowledge and success in the treatment of diseased eyes, he feels confident in thus offering himself to the public. He would further state for the benefit of those who may reside at a distance wishing to put themselves under his care that he has suitable boarding accommodations where all such persons will be provided for in the best possible manner, and that no means will be spared to insure entire success.

On account of this advertisement, after proper notice and a refusal to withdraw it, the advertiser was expelled from Stark County Medical Society by action of the Society. Thus to ophthalmology, claimant of many firsts in medicine, including establishment of the first Specialty Board, goes the dubious honor of the first expulsion from the Illinois State Medical Society.

At the same meeting of the State Society was presented what appears to be the first paper on an ophthalmologic subject given in Illinois. Dr. E. S. Cooper<sup>1</sup> of Peoria, Secretary of the Society in that year, reported on the use of collodion in entropion. At the same meeting he also presented a "new instrument for catheterizing the urethra" and made remarks on the treatment of "Incomplete Anchylosis of the Knee-Joint," which would seem to disclose a rather incidental interest in ophthalmology. However, at the meeting of the Society in 1853, he read a paper on "Medical and Surgical Diseases of the Eye," which unfortunately was not published in the transactions so that no evidence of the scholarly or erudite character of his remarks has been preserved for posterity.

From 1853 to 1860, there is no reference to ophthalmologic topics at any

<sup>1</sup> Dr. Cooper was for some years a resident of Peoria where he established a hospital devoted primarily to surgery. He later went to Paris to pursue further his studies in general surgery. Soon after returning to the United States, he moved to the West Coast where he became well known as a surgeon. In 1888, the Medical Department of the University of the Pacific was renamed the Cooper Medical College in his honor. This school later became the Medical Department of Stanford University.

State meeting. Although Dr. Holmes was listed as a member of the Society in 1857, he apparently took no active part in its deliberations until the meeting at Paris, Illinois, in 1860, when he is listed as a delegate from the Chicago Charitable Eye and Ear Infirmary, a member of the Nominating Committee, and the lone member of a standing Committee on Diseases of the Eye. In his report published in the 1860 transactions, Dr. Holmes raised the question whether or not inflammatory diseases of the eye were more common in the West than the East, and came to the conclusion that they were, probably because of conditions of climate. He divided conjunctivitis into two classes: those depending upon climatic and geologic peculiarities, and those depending upon the habits of the people. He noted: "There is no doubt that great care in regard to cleanliness on the part of families in which mucopurulent ophthalmia exists would tend to protect many individuals from attack." In discussing the type of cases being seen at the Chicago Eye and Ear Infirmary, which had been established in 1858, he said that the ophthalmoscope (then ten years old) was of the greatest importance in diagnosis, and felt that it could be used without danger to the patient. Optical iridectomy was recommended for patients with pupils occluded following iritis. He commented on sympathetic ophthalmia and recommended extirpation of the injured eye as soon as the first symptom of inflammation was observed in the other eye. His remarks about the sad state of ophthalmic practice are of interest:

"In concluding this Report I wish to offer for your serious consideration a few remarks upon the importance of the study of ophthalmology. There is no doubt that this interesting branch of medical science is lamentably neglected by our profession throughout this country. . . . It is difficult to explain why ophthalmic science has been thus neglected since diseases of the eye are among the most common afflictions we meet and there is scarcely a field in which a physician can labor with so much good to others as in this. . . . The neglect of the study of the diagnosis and treatment of disease of the eye by so large a proportion of our profession will account in part, we think, for the want of confidence which the public everywhere feels in the skill of our physicians in the treatment of diseases of the eye."

No meeting of the Illinois State Medical Society was held in 1861 or 1862, as a large number of Illinois physicians was serving in the Civil War. At the 1863 meeting, held in Jacksonville, it is noted that in the afternoon of the first day, the members visited the Institution for the Blind, and in a resolution subsequently adopted, approved the proficiency of the pupils in their studies and the excellent sanitary conditions found. At this meeting, Dr. Holmes read a paper on "Diseases of the Eye," particularly emphasizing catarrhal ophthalmia, sympathetic ophthalmia and glaucoma. He stated that he had had no experience in the treatment of sympathetic



ophthalmia by removing a piece of iris, as had been advocated, but felt removal of the injured eye to be most important.

In 1864, the Special Committee on Ophthalmology consisted of Drs. Holmes, R. E. McVey of Waverly, J. S. Whitmire of Metamora, and F. B. Haller of Vandalia. As chairman of the committee, Dr. Holmes reported that, in spite of a request for the contribution of ophthalmic information, not a single response had been received. He stated that of the 2289 eye diseases seen by members of the committee and tabulated, 1128 were affections of the conjunctiva, inflammation of which was stated to be one of the principal causes of blindness. Trachoma was not named or clearly differentiated, although this disease had been known to exist since earliest antiquity. Copper sulphate was recommended by Dr. Holmes as of the greatest benefit in the treatment of "conjunctivitis," while mercury was advised for the treatment of iritis. He commented that "glaucoma is evidently not a common disease of the West. Only three cases of this affliction . . . have been observed in Chicago." This undoubtedly reflects the paucity of diagnostic aids for this condition rather than the rarity it would seem to imply. Another comment is of interest: "But few cases of anomalies of the refractive media have been under the care of your committee (48 had been reported of the 2289 cases seen). This is explained by the fact that patients suffering from myopia and presbyopia apply to the opticians for advice. Your committee has not been in the habit of making careful examination of the eye affected with strabismus in reference to the existence of myopia or hypermetropia, neither has he instituted suitable investigations to determine whether asthenopia was dependent upon weakness of the recti muscles, or upon hypermetropia, formerly termed excessive presbyopia. Not a single case of astigmatism has been detected, although no investigations were made by your committee till within two years." This last statement is of interest; while 95 per cent of refractive errors show an astigmatic component and Airy first corrected astigmatism with cylindrical lenses in 1827, the question was almost uniformly neglected by ophthalmologists until publicized by Donders in 1862, just two years before Dr. Holmes's report.

Dr. J. S. Hildreth of Chicago appears not to have taken quite as vital a part in the State Society as did Dr. Holmes, although he read a paper at the 1867 meeting on "The Cause and Treatment of Panniform Corneae Occurring with Granular Ophthalmia." He advocated the use of atropine, stimulating applications of either ammonium bromide, tannin and glycerine, or a mixture of red precipitate, calomel, zinc sulphate and camphor in lard, "division of the ciliary ring," syndectomy and "appropriate constitutional measures."

By 1869, Dr. Holmes had as his fellow-members on the Special Commit-

tee on Ophthalmology Dr. Hildreth and Dr. Samuel Jones, both of Chicago. His report for that year covered his personal experiences over the preceding thirteen year period, during which time he had observed 7437 eye cases, of which 4292 were charity and 3145 were private patients.

In 1870, Dr. Hildreth was listed as chairman of the committee but gave no report. Dr. Holmes had prepared a report on conjunctivitis of infants, recommending the use of 2 to 4 per cent silver nitrate applied with a camel's hair brush to the conjunctiva once or twice a day. Frequent cleansing with tepid water was recommended. He considered most cases to be simply catarrhal conjunctivitis, but infection from the leukorrheal or gonorrheal discharge in the vagina of the mother was recognized.

The committee in 1871 was composed of Drs. Holmes, H. H. Roman of Springfield and J. P. Johnson of Peoria. As usual it was Dr. Holmes who gave the report, this time a statistical study on cataract. During fourteen years he had operated upon a total of 46 cataracts, in 40 of which he had obtained good results. All but one of the unfavorable results were due to iritis, and in that one there was a "fearful suppurative iridochoroiditis." Considerable vitreous was lost in 3 cases, and 13 required a subsequent removal of retained capsule. It is interesting to note that Dr. Holmes, the leading ophthalmologist in Illinois, had performed an average of less than four cataract extractions a year and that, even without the advantage of aseptic surgery, antibiotics and sutures, his results were fairly satisfactory.

In 1872, Dr. F. C. Hotz of Chicago gave a paper on "Quinine as a Local Remedy for Vascular Cornea." It was recommended that the drug be used in "granular ophthalmia" (trachoma), dusted over the conjunctival surface of the lids twice a day with the favorite camel's hair brush. He felt that the effect upon the cornea (pannus) was good but that it had little effect upon the granulated lids. Dr. Hotz was at that time a second Vice-President of the Society and a member of the Committee on Ophthalmology together with Drs. Holmes, Johnson and H. W. Boyd of Chicago who was chairman. Dr. Boyd did not give a report at this meeting, but the indefatigable Dr. Holmes did not fail ophthalmology. He gave a report on the treatment of iritis, emphasizing the use of atropine and warning of its local and central effects in susceptible individuals. Dr. Holmes also reported a case of orbital aneurysm cured by injecting iron persulfate deep into the orbit "and probably fairly deep into the aneurysmal sack, since the symptoms subsided at once."

At the 1873 meeting there were two ophthalmic papers. Dr. Holmes reported on "Intraocular Tumors," discussing sarcoma of the iris and choroid, cysts of the iris, one "rare iris tumor," and "glioma," which he stated invariably reappeared in the orbit after extirpation of the eye. Dr. Hotz gave a paper on the use of strychnia in amaurosis and concluded that

small doses of strychnia could produce a marked stimulation of the optic nerves. It was recommended that a dose up to  $\frac{1}{12}$  grain could be given hypodermically without any injurious effect. "It is a valuable remedy in functional and traumatic amblyopia, also in tobacco amaurosis, provided the patient abstains from smoking. It is of no avail in cases of morbid change in the choroid or retina, nor in far advanced atrophy of the optic nerves." Dr. E. P. Cook of Mendota, in discussing this paper, felt that the sense of the matter had been translated from a German work and that the substance had appeared in the American journals. Dr. Holmes, who was then first Vice-President of the Society, defended Dr. Hotz's presentation.

In his report to the Society in 1876, Dr. Holmes made the following comments: "During the few years previous to 1865, ophthalmologists were reproached as too often speaking with undue pride of the rapid progress of their specialty, as if other branches of medical science were not progressive. The truth is, however, that those who had devoted ample time to ophthalmology were not without reason dazzled by the brilliant discoveries in the special field subsequently in 1851. They saw that while in other branches there was great progress, ophthalmology was quite suddenly elevated from a low to a high position and separated if possible farther from other recognized departments than even surgery is from medicine. . . . Now there is scarcely a medical college in the world which has not established a chair of ophthalmology. . . . So numerous and important had been the steps of advance that there was until recently but little encouragement for the preparation of a general work on ophthalmology—for but a short time could elapse before such work would be obsolete."

In 1878, Dr. Holmes read a paper at the meeting of the State Society on "Ophthalmology as Related to General Medicine." Most of the statements in that paper are just as applicable seventy years later as they were then. At the same meeting Dr. W. T. Montgomery of Chicago gave a number of case reports, and Dr. S. J. Jones read a paper on affections of the lachrymal apparatus, describing particularly probing of the ducts and incision of the canaliculus, as was being advocated.

In 1879, Dr. Jones,<sup>2</sup> reporting on the "Present State of Ophthalmology," stated: "Another popular error that cannot be corrected too soon is that in nearsightedness, as well as in the changes in the eye that occur in advanced life, spectacles should be dispensed with as long as possible and thus unaided sight can be longer preserved. Such a fatal mistake could only originate in ignorance of the object for which glasses should be worn. . . . Another unfortunate impression prevails regarding the selec-

<sup>2</sup> Dr. Jones served as Permanent Secretary of the Illinois State Medical Society from 1880 to 1885. For many years he also was Professor of Ophthalmology at the Chicago Medical College (later Northwestern University Medical School).



tion of glasses when required, which is that they are not adjusted on any scientific principle, but haphazard and that they, or an optician, or a jeweler who may sell spectacles, can select appropriate glasses as well as an oculist. An optician holds the same relation to an oculist as an apothecary does to a physician."

In the year 1880, Dr. Montgomery as chairman of the Standing Committee on Ophthalmology, described a case of double optic neuritis occurring from a "violent fit of anger" and successfully treated with leeches, potassium bromide, chloral hydrate, mustard foot baths and laxatives. In a supplemental report, Dr. J. M. Everett of Dixon exhibited a magnet for removing iron from the eye and reported the discovery of homatropine, a new mydriatic, by Professor Ladenberg of Germany.

At the 1882 meeting, Dr. Montgomery "called the attention of the Society to a card published in the newspapers by A. E. Prince, M. D. Dr. Prince admits that his acts, if not unprofessional have been in bad taste and calculated to lower the standing of the profession. He further says that his attention having been called to the impropriety of his acts, he has entirely discontinued such publication and that he will in future be careful to observe the code of ethics in its spirit and letter." At this same meeting Dr. Prince reported as chairman of the Committee on Ophthalmology, attempting to introduce the term "asthenopia atonica" for ocular discomfort not on the basis of refractive errors or muscle imbalance, and recommended reading glasses with base in prisms for correction of the condition.

The following year (1883), Dr. Jones presented an inclusive report on ophthalmology at the State Society's meeting. He noted that "nothing can be done to stop the progress of a forming cataract, and that only a surgical operation can remove it when formed," an observation which still holds true seventy years later. He stated that the use of eserine had not supplanted iridectomy for glaucoma. The lack of a cure for retinal detachment was decried. Dr. Jones reported that "optociliary neurotomy has in the last few years been performed instead of enucleation of the diseased eyeball (in sympathetic ophthalmia) but the result has, in so many cases, been so unsatisfactory that it has been practically abandoned and enucleation of the defective eye is still regarded as the main reliance in cases of threatened or existing sympathetic inflammation of its fellow." Attention had been called to the occurrence of idiopathic hemorrhage into the vitreous humor of the young, similar to the recurrent epistaxis which is so frequent at the same period of life. Other topics discussed were the recent introduction of the electric light and possible advantages or disadvantages to the eye, eye headache, color blindness, exophthalmos, and the lighting of school rooms.

That proper use of the eyes was being given consideration is evident by a paper presented the following year (1884) by Dr. Hotz, entitled, "Which of the Books Our Children Read Are Injurious to Their Eyes?" He considered the possible effect of reading on the development of myopia in children, and advocated proper size type and paper. Of the school books studied, only the dictionary had print smaller than could be considered acceptable, but many of the books read at home were found to be unacceptable from this standpoint. Dr. Hotz concluded: "Look at a child when it is deeply absorbed in a story book, see how the little face gradually approaches and almost touches the page; think then of the enormous muscle strain these young eyes have to endure in order to read this miserable print and you will know at whose door we have to lay the blame for the impaired sight of many children. You will unite your efforts with mine in holding up before the people the danger of these cheap books and periodicals. For too dearly bought is this cheap literature, if it is to be paid for with the priceless gift of Nature—good eyesight." One cannot help but wonder what Dr. Hotz would have thought of the movies and now television.

In his 1885 report to the Society, Dr. Montgomery stated that "the past two or three years will be memorable in the history of this specialty. The discovery of jequirity as a remedy for chronic granular conjunctivitis will hold a position not less important than the discovery that the operation of iridectomy has a curative effect upon a large per cent of glaucomatous eyes. The discovery of the local anesthetic properties of cocaine will take rank in importance with the invention of the ophthalmoscope." The last prognostication bears merit, but sixty-five years later ophthalmologists know nothing of jequirity, which even then was not completely accepted for Dr. Jones, in discussing a paper by Dr. Robert Tilley on the use of this remedy, stated: "Patients who entrust their welfare to us have a right to expect that their cases will not only be treated intelligently but with the same care and prudence, and with the same interest that we would wish to have exercised in our own cases if we were unfortunate enough to be the patients instead of being the physicians. I very much doubt if the enthusiasts for jequirity would be as willing, and I had almost said as reckless, in having that remedy used as freely in their own eyes, as they have been in using it in the eyes of others." Dr. Jones's criterion of therapy remains as a standard still applicable.

The general progress of ophthalmology is recorded in Dr. Tilley's 1886 report with comments on advances in the study of circulation in the eye and formation of aqueous, refractive errors in the newborn, the actual cautery, and introduction of Mules's spheres in enucleations.

The following year (1887) Dr. Jones reported that "the yearly contribu-

tions to the science have been greater in all directions, and the result has been an accumulation of varied character and in a comparatively short time—an accumulation that might almost be regarded as an embarrassment of riches. . . . The process of elimination must be resorted to, and one finds the mistakes that usually attend rapid development and premature announcement of supposed discoveries, and finds that here, as in other places in the wide field of medicine, many cherished theories, many vaunted remedies, and many novel and lauded operative procedures have failed to stand the practical and reliable test of time. . . . The introduction of boric acid alone as a topical application to the conjunctiva has done much to simplify the treatment of conjunctivitis. . . . The use of cocaine to the conjunctiva continues to meet the expectations aroused by its introduction into ophthalmic practice. Its use in the removal of foreign substances lodged in the conjunctiva or in the cornea affords a great comfort to the patient, and is of real service to the physician in effecting removal. . . . The part which blenorrhagic micrococcus or gonococcus plays in producing morbid discharge from mucous surfaces, including the conjunctiva, is one of the problems not yet fully solved. . . . Von Hippel has recently reported a successful case of transplanting corneal tissues in the case of a young woman. By removal of an opaque portion from the center of the cornea, by means of a trephine, down to the membrane of Descemet, and then by means of knife and forceps removing still more of the opaque corneal tissue, an opening was made into which he transplanted a piece of cornea from a rabbit's eye, with aseptic precaution. . . . Vision through the transplanted portion was reported as being 20/200."

Four papers on ophthalmology were presented at the Society meeting of 1889. Dr. Lyman Ware of Chicago presented "Syphilitic Cycleitis, with Gummata." Dr. C. H. Beard of Chicago discussed the age-old important problem of the relation of the eye to general disease, and Dr. Prince presented a new forceps for squeezing trachomatous follicles. The official report of the chairman of the Standing Committee on Ophthalmology, in this year Dr. H. M. Starkey of Chicago, noted: "We are particularly indebted to Dr. Julian J. Chisholm<sup>3</sup> of Baltimore for calling attention to the necessity of correcting even low degrees of astigmatism, and to Dr. George Stevens for his continued work and writings in elucidation of affections of the ocular muscles. I myself now have a considerable number of patients whose pain and discomfort were such as that they feared they must abandon the employment in which they were engaged, and who were entirely relieved by the low power cylinders. . . . Dr. Galesowsky called attention to the close connection between some eye trouble and

<sup>3</sup> Dr. Chisholm had published a paper entitled "The Great Value of a  $\pm 0.25$  D Cylinder in the Relief of Headaches and Eye Pains."



irritation of the upper teeth." Among the new methods of treatment described by Dr. Starkey were antipyrine for relief of pain, irrigation of the eyes with dilute sublimate solution as recommended by Dr. Hotz in a paper at the meeting of the American Medical Association in 1887, and a new ocular antiseptic, creolin. Dr. Starkey commented on the discussion by Dr. A. C. Corr of all the eye papers: "I cannot at all agree with Dr. Corr (who had recommended a strong solution of tannin in glycerine and water) in his treatment of ophthalmia neonatorum. I do not believe we can discard nitrate of silver solution in these particular cases for any other remedy that we possess . . . in the terrible case of gonorrheal ophthalmia (and you will grant that this term is not too strong when you recall that about one-half the blind people in the world are blind from purulent conjunctivitis). While we may control the discharge and swelling to a great extent by antiseptics and thorough cleansing, we cannot prevent the disease going straight through the cornea in a certain proportion of cases. We used to think the cornea necrosed because the swelling of the surrounding tissues cut off its blood supply but cases . . . have led me to conclude that the specific poison (the gonococcus if you will) acts directly and destructively upon the cornea. . . . It has been demonstrated that by proper precautions the occurrence of ophthalmia neonatorum can be almost entirely prevented. . . . The eyes should be irrigated with a 2 gram to the ounce solution of silver nitrate."

In 1890, Dr. Hotz read a paper on "The Nature of Eyestrain and Its Relation to Headache and the Nervous Disorders" in which he emphasized heterophoria as well as refractive errors. The latter were fairly well recognized in the profession by that date although, according to Dr. Thomas Shastid, many general practitioners of that era still refused to recognize that headaches could be produced by refractive errors in the young and vigorously opposed their correction with lenses, a fact which helped the development of the non-medical refractionist.

In 1891, Dr. Corr covered a multitude of subjects in a paper with the rather general title of "Little Things in Ophthalmology." He stated: "I am quite sure that I have seen it (iritis) arise from excessive functional activity of the eye laboring under the disadvantage of an error of refraction." Thus, the pendulum swung to the left too far. Dr. Corr, like many men of the period in smaller communities, did not practice the specialty alone but combined it with a generous sprinkling of general practice. In 1895, he presented two papers at the State meeting, the first on "Trachoma of the Conjunctiva, not a Disease in Itself" and the other entitled "Emasculation and Ovariectomy as a Means of Punishment and Reformation of Criminals."

Among others to present papers before the then established Section on

Surgery and Surgical Specialties of this Society during the last decade of the 19th century were Drs. William H. Wilder, A. L. Adams, Lyman Ware, A. E. Prince, J. E. Colburn and Boerne Bettman.

Comment has been made of the fact that early ophthalmologists always combined their specialty with otology or with a combination of ear, nose and throat, and it seems certain that even in Chicago there was added a certain amount of general practice. According to Dr. Casey Wood, Dr. E. J. Gardiner was the first in Chicago to limit himself strictly to the eye and ear. There seems to be some doubt as to who was the first man in Illinois to confine himself to ophthalmology exclusively. Dr. Cassius Wescott may well have been the first although, according to the transactions of the Illinois State Medical Society for 1893, he discussed a paper on lacerations of the rectum and described his experiences with this rather non-ophthalmologic condition.

The first textbook of an ophthalmologic nature published in the State of Illinois appears to have been one entitled "Ophthalmic Surgery and Treatment, with Advice on the Use and Abuse of Spectacles" by John Phillips, published by the Western New Company in 1869. The author is listed as optician and oculist, without the inclusion of an M.D. degree. In the preface he pays tribute to "my friend Dr. Lord of Springfield, who has greatly assisted me by many suggestions, during keeping the Infirmary for four years at Springfield; also to Dr. J. B. Walker, Dr. Ralls Smith, and Dr. Underwood of Chicago, who have greatly assisted me in many important suggestions, during keeping the Infirmary twelve years in Chicago. Also to Dr. David Prince, Jacksonville, Illinois." This would indicate that "Mr." Phillips or "Dr." Phillips, as he is alternately referred to, was engaged in his activities in Springfield from 1853 to 1857 and in Chicago thereafter. The textbook appears to be quite complete for the period and intimates that the author practiced surgery and ocular therapeutics. The portion of the book on spectacles was reprinted in 1870 and conforms to the general conception of the use of glasses at that time. The back cover of the reprinted pamphlet carries an advertisement of "Dr. John Phillips, Optician and Oculist, 168 Clark Street, Chicago," offering for sale telescopes, stereoscopes, opera glasses and French artificial eyes. On the inside back cover is an advertisement of the "Eye and Ear Infirmary at 82 Madison Street, Dr. J. B. Walker, Operating and Consultant Surgeon," with testimonials of patients who had been cured by the skill of Dr. Walker who "performs every operation connected with ophthalmic and aural surgery, such as for cataract, artificial pupil, cross eye, tarsal tumor, closure of the tear duct," etc. In the body of the pamphlet are testimonials offered by Dr. Phillips as an "introduction to those to whom he is at present unknown." These include a number of Illinois physicians, among them Dr.

David Prince of Jacksonville who stated: "I have taken some pains to ascertain Dr. Phillips' claims for patronage as an optician and can unhesitatingly recommend him to those needing spectacles, or who are about to need them. I have also witnessed his treatment of chronic inflammation of the eyes and can assure the public that while his treatment is safe, it is more than usually successful." Most interesting of all, however, is the first testimonial: "As far as my acquaintance with Mr. John Phillips extends, I regard him as a worthy gentleman, and very competent in his profession." This somewhat qualified and cautious endorsement is signed by A. Lincoln, President of the United States.

In spite of favorable reviews of Mr. Dr. Phillips' book published in the *Chicago Medical Journal*, *Chicago Medical Times*, *Chicago Tribune* and the *Prairie Farmer*, the nature of the published testimonials would throw some doubt on his ethical standing in the profession, which had expelled a member from the State Society for advertising in 1852. Thorough search has not revealed much further information as to the author of the book, who would appear to have come to Chicago the same year as Dr. Edward L. Holmes. Examination of the Chicago City Directories for the period reveals that John Phillips was listed in various directories as "optician," "oculist and optician" and "oculist" from 1859 until his last listing in 1893, the only other information gleaned from that source indicating that he had been born in England.

In a paper on "The History of Ophthalmology in Chicago" delivered before the Chicago Ophthalmological Society in 1917, Dr. Casey A. Wood made the following comments: ". . . while early ophthalmology quite properly boasts of its prophets and martyrs who kept the faith yet it had also its Chevalier Taylors who, picturesque though they were, treated the practice of medicine as simply a commercial proposition. We had such in the early history of Chicago and I am tempted to refer to one who, while he shall be nameless here, is probably known, at least in a traditional way, to some of you. This man, half oculist, half optician, chose Chicago as his headquarters and made more or less regular journeys into the outlying country for the purpose of fleecing the not unwilling inhabitants. He was no peddler of cheap glasses but an aristocrat who moved about in first class style. He generally traveled from place to place in a coach-and-four, accompanied by all the equipment that properly goes along with that means of locomotion. Occupying the best rooms in the best hotels and his visit heralded by effective advertisements, he was able to sell glasses made from his 'special form of quartz pebbles' whose action on the eyes was not only mystic but marvelous. The frames of these wonder-working spectacles were especially prepared for his patients and were engraved in the highest style of art. He generally advised his non-presbyopic patients to wear three



pairs of these miraculous pebble glasses, whose refractive power, by the way, was usually a quarter, a half and three fourths of a diopter and for which I have known him to receive the sum of \$200."

#### EARLY UNDERGRADUATE TEACHING OF OPHTHALMOLOGY

Rush Medical College, the first medical school in Chicago, gave no courses in ophthalmology until 1859, when Dr. Edward L. Holmes was appointed Lecturer in Ophthalmology and Otology for the spring term. He continued in this capacity until 1869, when he was appointed Professor of Ophthalmology and Otology, a position he was to occupy for the next twenty-nine years. The Rush catalogue of 1878-79 noted that "Prof. Holmes will give regular clinical instruction on ophthalmic and aural diseases at the Illinois Charitable Eye and Ear Infirmary, N. W. corner of Adams and Peoria Sts. every Monday afternoon. A new operating room for the Infirmary is contemplated and will probably be completed before October. During the past year 1603 patients have received treatment at the Infirmary. An excellent opportunity is offered for studying the diagnosis and medical and surgical treatment of diseases of the eye and ear. Prof. Holmes will also give private instruction in the use of the ophthalmoscope and the adaptation of spectacles." From 1869 to 1889, Dr. Holmes was the only ophthalmologist holding academic rank on the faculty, although Dr. W. T. Montgomery was mentioned in the description of courses offered as being an Instructor in the Dispensary as early as 1878.

Among others later listed on the Central Free Dispensary staff or assisting Dr. Holmes in his clinics at the College or Infirmary were Drs. F. C. Hotz, Lyman Ware, E. W. Whitney, F. C. Schaefer, S. S. Bishop, J. E. Colburn, Alfred Hinde and H. W. Howard.

In 1889, Dr. Hinde appeared on the faculty list as "Ophthalmologist to the Neurological Clinic." He was the first after Dr. Holmes to receive faculty appointment. It should be borne in mind that these appointments were few in number and that, in 1877, there were only eleven members of the regular faculty. Dr. C. D. Wescott was added as Instructor in Diseases of the Eye and Ear in 1893, Dr. W. C. Cox in 1895, and in 1897, Dr. W. H. Wilder. During this period, Dr. Holmes and Dr. Ware were the only attending ophthalmologists to the Presbyterian Hospital.

In 1898, Dr. Holmes retired and Dr. Hotz was appointed Professor of Ophthalmology and Otology. The other members of the department were Drs. Wescott, Wilder and E. T. Dickerman as Instructors, and Drs. R. A. MacArthur and E. A. Lawbaugh as Clinical Assistants. The following year (1899), Drs. Stuart Webster and E. V. L. Brown were added as Clinical Assistants. In 1900, Drs. Wilder and Wescott were advanced to the post of Assistant Professors; Dr. Dickerman was named Instructor; Dr. Lawbaugh,

Associate; Dr. MacArthur, Clinical Associate; Drs. Webster, C. C. Rogers, L. E. Schwarz and George Shambaugh, Assistants, and Dr. Brown, Clinical Assistant.

The Medical School of Northwestern University opened as the Medical Department of Lind University in 1859 with the first graded curriculum two years in length, with a junior preclinical and a senior clinical year. Ophthalmology was completely omitted from the curriculum until 1866, when it was announced that "Dr. J. S. Hildreth, who has charge of the Ward (of the Cook County Hospital) set apart for diseases of the eye and ear, will give a Clinic in that department every Saturday." This statement was repeated in the catalogues of 1867 and 1870, but Dr. Hildreth's name was not included in the faculty listing. In 1871, however, after the death of Dr. Hildreth, Dr. Samuel J. Jones was appointed Professor of Ophthalmology and Otology and a course on diseases of the eye and ear and practical training in the use of the ophthalmoscope was offered during the second year of the three year course. Dr. Jones constituted the entire department of ophthalmology and otology until 1878, when Dr. S. O. Richey is mentioned as a member of the Eye and Ear Department in the Dispensary. The following year the name of Dr. H. M. Starkey was substituted, and in 1881, that of Dr. F. C. Schaefer was added. Dr. Starkey later was listed as giving a clinic at Mercy Hospital and, in 1891, his name is found on the faculty list as Clinical Lecturer in Ophthalmology and Otology. Although Dr. Jones had been the Professor since 1871, not for twenty more years was another man listed as having any academic appointment within the department, the names of Drs. Richey, Schaefer and Starkey having been listed only as giving clinics or assisting in the Dispensary. In the 1891 catalogue, Dr. F. C. Hotz was named as ophthalmologist to the Wesley Hospital to be opened shortly, but when the hospital actually opened in 1893, Dr. Starkey was not only the ophthalmologist but in the same year became Professor of Clinical Ophthalmology and Otology. In the meanwhile, Drs. J. R. Kewley, Starkey and J. H. Besharron held the rank of Instructor from 1891 to 1893. The department, in 1894, was comprised of Professors Jones, Starkey and Henry Gradle (who was given the remarkable title of Professor of General Etiology and Hygiene and Clinical Ophthalmology and Otology), and as Instructors in Clinical Pathology, Drs. William A. Mann and C. P. Pinckard. In 1895, the name of Dr. A. M. Hall was added and, in 1896, that of Dr. Paul Guilford.

The College of Physicians and Surgeons of Chicago, later to become the College of Medicine of the University of Illinois, did not open its doors until 1882. While three years of instruction were recommended, only two years were required. The catalogue of 1883 lists "a full course of lectures, didactic and clinical on diseases of the eye and each member of the graduat-

ing class will be instructed in the use of the ophthalmoscope." Dr. John E. Harper was in charge, listed as Professor of Ophthalmology and Clinical Diseases of the Eye, later (1883-87) as Professor of Ophthalmology and Otolaryngology, still later (1888-91) as Professor of Diseases of the Eye and Clinical Ophthalmology, and finally, in 1900, Professor of Ophthalmology and Clinical Ophthalmology. This variation of titles indicates some of the changing concepts, especially as to the affiliation between ophthalmology and otology. Dr. Boerne Bettman was Lecturer in Ophthalmology and Otolaryngology from 1883 to 1886, and then followed Dr. Harper as Professor in 1891. When the latter returned to the faculty in 1898, both were listed with the rank of Professor until 1900, when Dr. Bettman's name no longer appeared. From 1882 to 1886, Drs. Harper and Bettman seem to have constituted the entire department, not only of ophthalmology but also otology. In 1887, with Dr. Bettman gone, Dr. G. Erwin Brinckerhoff was given his post as Lecturer, and Dr. J. B. Loring was listed as an attending physician in the Eye and Ear Department of the Dispensary where he remained for a number of years. Others to be added to the Dispensary staff during this time were Drs. H. M. Martin, H. B. Williams, W. E. Gamble and Oscar Dodd. The latter two, together with Dr. Loring, were made Clinical Instructors in 1893, and Dr. Gamble was named Adjunct Professor of Ophthalmology in 1900. In that same year Dr. Casey A. Wood was listed as Professor of Clinical Ophthalmology.

#### EARLY POSTGRADUATE TRAINING IN OPHTHALMOLOGY

Very little opportunity was offered in Illinois, and none outside Chicago, for training in ophthalmology during the 1850-1900 period. Men desiring to prepare themselves for specialization—and this meant in the fields of ophthalmology and otology, and later in the combined eye, ear, nose and throat field—were obliged, for the most part, to go either to one of the institutions on the eastern seaboard or to Europe for postgraduate study.

As far as can be determined from the records, the first internship was established at the Illinois Charitable Eye and Ear Infirmary in 1887, when William L. Noble was appointed to serve for one year. The number of internships was increased from one to three in that institution in 1897, and from three to four in 1907. There was no other residency or internship in ophthalmology in Illinois prior to 1900.<sup>4</sup> Short postgraduate courses were offered occasionally by such institutions as the Chicago Polyclinic, founded in 1886, with Drs. Hotz and Colburn as Professors of Ophthalmology; the Postgraduate Medical School of Chicago (1886) under Dr. W. Franklin Coleman, and the Illinois Postgraduate Medical School

<sup>4</sup>A residency in ophthalmology was not established at the Cook County Hospital until 1916.



(1896) with Drs. Boerne Bettman, William L. Noble and G. F. Hawley. In 1897, the Chicago Eye, Ear, Nose and Throat Hospital was incorporated with postgraduate outpatient teaching, but no hospital facilities were acquired until 1901. These institutions all specialized in turning out specialists in record time—from three weeks on up. In its first twenty-five years, the Chicago Eye, Ear, Nose and Throat Hospital turned out over 3000 such "short term" eye, ear, nose and throat specialists. This method of training would scarcely be condoned by the American Board of Ophthalmology today but the inadequacy of training opportunities of the era must be borne in mind. Indeed, many specialists of the day were largely self-trained or had obtained their experience as assistant to some established ophthalmologist.

#### THE PREVENTION OF BLINDNESS AND CARE OF THE BLIND

Trachoma came early to Illinois and became rampant in certain counties, especially in southern Illinois. It was a scourge not to be eradicated until long after 1900 when, through the instigation of the Illinois Society for the Prevention of Blindness, trachoma clinics were established under the direction of the Illinois Charitable Eye and Ear Infirmary. In 1900, a study of the incidence of trachoma in various counties as determined by the cases seen at the Infirmary between 1880 and 1900, showed that the highest incidence of hospitalized cases had come from Jasper County which, with a population of 20,160, had sent 77 cases, an incidence of 0.382 per cent as compared to 0.013 per cent for Cook County. Aside from Winnebago County at the northern border of the state, which had an incidence of 0.167 per cent, the disease was most widespread in the southern half of the state.<sup>5</sup> The story of the control of this affliction is fascinating and dramatic, but it belongs largely to the 1900-1950 period, as does the account of the prevention of ophthalmia neonatorum.

The Illinois School for the Blind at Jacksonville was opened on June 5, 1848, as the Illinois Institution for the Education of the Blind. The eleventh such school in the United States, it was at first privately supported by gifts from citizens of Jacksonville and Morgan County. The instigator, who served as the first Principal, was Samuel Bacon, then twenty-six years of age and blind since the age of twelve. On his way to visit relatives in Galena from his home in Cortland, Ohio, he stopped off to visit the new institution in Jacksonville (the State Asylum for the Deaf and Dumb) under the misapprehension that it was a school for the blind. Dauntlessly he remained there to organize such a school. In 1849, the new school was taken over by the State of Illinois and, in 1905, the name was changed to

<sup>5</sup> For a different approach to the trachoma problem, the reader is referred to Chapter II in this Volume.—*Editor*

the Illinois School for the Blind. From 1849 to 1900, the school cared for approximately 1720 blind people. In 1853, students were admitted between the ages of 12 and 30, but by 1896 the age limits had been changed to between 6 and 21 years. It has always been the aim of this institution to turn out "well-rounded individuals" with a literary education through the high school level and with training in dexterity in handling tools. Music has always been emphasized. Prior to 1890, eye care for the students was provided by general physicians. In 1890, Dr. A. E. Prince was appointed Consulting Oculist, a position he held for two years, followed by Dr. A. L. Adams, who held this appointment from 1892 to 1949.

#### EARLY OPHTHALMOLOGISTS IN CHICAGO

*Dr. Edward L. Holmes*<sup>6</sup> was born in Dedham, Massachusetts, in 1828. After graduating from Harvard College in 1849, he taught Latin, Greek, French and mathematics at the Roxbury Latin School for a short period and then entered Harvard Medical School, from which institution he received his M.D. degree in 1854. After a year as surgical resident at the Massachusetts General Hospital, he went to Paris and Vienna for post-graduate study in ophthalmology and otology. For a year and a half he was exposed to the influence of Helmholtz, Virchow and von Graefe, and returned to America to begin practice in Chicago in 1857, the year in which von Graefe discovered iridectomy for glaucoma.

Dr. Holmes is credited with the founding of the Illinois Charitable Eye and Ear Infirmary which he established in 1858 as a one room eye and ear dispensary, maintained largely at his own expense. In 1862, the Chicago Charitable Eye and Ear Infirmary, as it then became known, was moved to 28 North Clark Street. The third annual report of the Infirmary showed that for the year prior to May 1861, 288 patients had been under treatment, with a total of 580 patients treated since the founding in 1858. The Illinois legislature gave the Infirmary a special charter on February 16, 1865, and, in 1867, appropriated \$5000 a year for two years for the treatment of such indigent patients of Illinois as desired treatment. This appropriation was renewed in 1869, but by the Constitution of 1870, state aid to private institutions was illegal. In the following year, 1871, the state legislature by special act took title to the Infirmary with the name changed to the Illinois Charitable Eye and Ear Infirmary. An addition to the building had been constructed in 1869 at the cost of \$6000, sub-

<sup>6</sup> Dr. Rudolph Holmes, son of Dr. Edward L. Holmes, became a prominent Chicago obstetrician and gynecologist. Upon his death, he left a trust fund under the direction of the Institute of Medicine of Chicago, establishing an annual memorial award in honor of his father for significant contributions to medicine, especially in ophthalmology, and preferably to investigators under 35 years of age. The first award was made March 1, 1954, to Dr. Arnall Patz for experimental work in retrolental fibroplasia.

scribed by the staff and trustees. The entire structure was destroyed in the Chicago fire on October 9, 1871. Fortunately, no patients were injured. Funds were provided by the legislature from insurance and from gifts for the rebuilding of what had become an important public medical institution. A site at Peoria and Adams Street was purchased for \$18,000 and the building (still occupied in 1954) was constructed at a cost of \$48,000.<sup>7</sup>

Dr. Holmes remained active at the Infirmary long after it had passed from private to state ownership, and continued to be its guiding light almost to the time of his death. He had been appointed to the faculty of Rush Medical College in 1860, and, in 1867, was made a full professor, a position which he occupied until 1898. During the last ten years of this period he also served as President of the College and was largely responsible for the founding of the Presbyterian Hospital. An early member of the American Ophthalmological Society which had been established in 1864, he took an active part in organized medicine and served as the first President of the Chicago Ophthalmological Society when it was formally reorganized in 1892. A man of culture in its broadest sense and possessed of marked organizational ability, he left a deep impression on the life of his time. He died in 1900 after having completed an extremely active medical career, participating in practically every medical movement in the State of Illinois during that period.

*Dr. Joseph Sullivan Hildreth* was born at Cohasset, Massachusetts, on May 1, 1832. After graduating from the Medical Department of the University of Pennsylvania in 1856, he also went to Europe where he studied under Desmarres in Paris and Virchow in Berlin. In 1862, he married Mary Howard of Detroit, daughter of a United States Senator. These family connections may have been responsible for his being called to Washington to establish an eye and ear hospital for the care of Civil War soldiers. On August 23, 1864, he was placed in charge of a hospital of the same nature in Chicago, the Army having commandeered the City Hospital at Wentworth Avenue and 18th Street. Under his administration it was renamed the Desmarres Hospital. After being evacuated by the Army, this institution was turned over to the county and was reopened as the Cook County Hospital on January 1, 1866. Political pressure caused Dr. Hildreth to be appointed aurist and oculist to the new County Hospital. This was not accomplished without vigorous objections as, according to Dr. Lyman Ware: "It was thought that an eye specialist was out of place in a general hospital, and that every good all-round surgeon was quite competent to treat such cases."

<sup>7</sup>From the humble beginnings of 1858, the Infirmary has increased in size and importance until nearly a century later it handles over 100,000 outpatients and 5000 hospital cases per year.



In 1868, Dr. Hildreth gave the first clinics in ophthalmology and otology at the Chicago Medical School (Northwestern University). He is said to have been a capable specialist but for reasons of personality was not overly popular with his colleagues. He became a charter member of the American Ophthalmological Society in 1866, and in 1870 died at the age of thirty-eight from an overdose of gelsemin for neuralgia.

Another of the early ophthalmic pioneers in Chicago was Dr. *Daniel Sigismund Jacobson*, who came there to practice in 1866. He had been born in Copenhagen, Denmark, in 1837. His father, said to have been a personal friend of Bartholdi and Mendelssohn, encouraged him to have an extremely liberal education. In 1856, he was granted a degree in philosophy and, in 1862, that of Doctor of Medicine in the University of Copenhagen. After the Schleswig-Holstein War, in which he served as an infantry surgeon, Dr. Jacobson began the practice of ophthalmology in Copenhagen, acting as assistant to Hansen Grut. On November 7, 1866, he arrived at New York and shortly thereafter established himself in Chicago as a general surgeon with special emphasis on ophthalmology and gynecology. Beginning in 1871, however, he limited himself to ophthalmology exclusively and established a private hospital and clinic at 303 Wabash Avenue. This was completely destroyed in the Chicago fire, and he again resumed general practice with emphasis on ophthalmology. He was ophthalmic surgeon to the Cook County Hospital from 1878 to 1885, and was the first ophthalmologist to Michael Reese Hospital in 1882. Rush Medical College gave him an honorary M.D. degree in 1881. In 1887, he became the first President of the Scandinavian Medical Society. He left Chicago in 1889 because of failing health, and returned to Copenhagen where he died in 1894.

Dr. *Samuel Jones* settled in Chicago in 1868, two years after Dr. Jacobson had arrived from Copenhagen. He was born in Bainbridge, Pennsylvania, in 1836, and graduated from Dickinson College with an A.B. degree in 1857. He received his M.D. degree from the University of Pennsylvania in 1860. As a U.S. naval surgeon, he participated in the famous engagement of the *Monitor* with the *Merrimac* at Hampton Roads. In 1868, he resigned from the service and went to Europe to study ophthalmology and otology. Locating in Chicago later that year, he soon took an active part in medical affairs, being credited with establishing the eye and ear departments of St. Luke's and Mercy Hospitals and the South Side Free Dispensary. He became Professor and Head of the Department at Chicago Medical College (Northwestern University) following the death of Dr. Hildreth, a position he held from 1870 to 1897. From 1874 to 1882, he was on the staff of the Illinois Eye and Ear Infirmary and, from 1875 to 1882, edited the *Chicago Medical Journal and Examiner*.

Dr. Jones achieved wide fame as an accomplished surgeon. His hobby is said to have been horses, and he was noted for his steeds and the splendor of his equipage. He never married. A year before his death in 1901, he retired and devoted his time to an anti-noise crusade.

*Dr. Ferdinand Carl Hotz*, born in 1843 at Wertheim in Baden, was educated at Heidelberg and Berlin where he was under such masters as Helmholtz, Knapp, von Graefe, Virchow and Langenbeck. Arriving in Chicago in 1869, he began practice as a general surgeon with special attention to the eye and ear, a rather general custom as the specialty was then evolving in this area. His interest appears to have been primarily in ophthalmology, however, as it is for his work in plastic surgery of the eye (Hotz entropion operation) that he is most noted. Dr. Hotz followed Dr. Hildreth as oculist and aurist to the Cook County Hospital (1870-75), and became associated with Dr. Holmes at the Presbyterian Hospital and Eye and Ear Infirmary (1875-92). He was at various times Professor of Ophthalmology at the Woman's Medical College, Chicago Policlinic and Rush Medical College (1898-1907). In 1888, he was Chairman of the Section on Ophthalmology and Otology of the American Medical Association and, in 1892-93, he was President of the Chicago Medical Society. Dr. Hotz is said to have been a versatile, contentious, and often hot-tempered man but an uncompromising hater of sham and quackery.

The first graduate of a local school to achieve eminence in the field of ophthalmology in Chicago was *Dr. Henry Gradle*. Born in Germany, he was brought to Chicago in 1865 at the age of ten. Graduating from the Chicago Medical College (Northwestern University) in 1874, he interned at Mercy Hospital and then spent three years in European study. A follower of Koch, he wrote the first treatise in English on the germ theory. From 1881 to 1885, Dr. Gradle taught physiology and hygiene at the Chicago Medical College, and then limited his practice to eye, ear, nose and throat. From 1897 to 1906, he was Professor and Head of the Department of Ophthalmology and Otology at his alma mater, and wrote a three-volume text on "Diseases of the Nose, Throat and Ear." Dr. Gradle died in 1911 at the age of fifty-five. His son, Dr. Harry Gradle, became one of America's best known ophthalmologists.

*Dr. Boerne Bettman*, born in Cincinnati in 1856, received his degree from the Miami Medical College in 1877. After serving as assistant to Williams of Cincinnati, Knapp of New York and Becker of Heidelberg, and following a considerable sojourn in Europe, Dr. Bettman came to Chicago in 1881. He was a skillful surgeon. In 1882, he had the distinction of being the first lecturer in ophthalmology at the College of Physicians and Surgeons (University of Illinois). He subsequently became professor there, succeeding Dr. John E. Harper. He also became associated with the Eye

and Ear Infirmary and Cook County and Michael Reese Hospitals. He organized the Chicago Ophthalmological and Otological Society and served as Secretary from 1883 to 1889. Concerning Dr. Bettman's organizing ability, the following account of the early years of the Chicago Ophthalmological Society is worthy of note:

There had been informal meetings of the ophthalmologists and otologists practicing in and near Chicago as early as 1880, held in various offices and occasionally at the Tremont House. Papers were read, topics of mutual interest discussed, and reports given of various experiences in visiting European clinics. The men in this early group were Drs. Holmes, A. P. Gilmore, Hotz, Jones, Gradle, Lyman Ware, J. E. Colburn, E. J. Gardiner and W. T. Montgomery. This informal group called themselves the Chicago Ophthalmological Society. After about three years the meetings lapsed and, in 1883, Dr. Bettman revived it as the Chicago Ophthalmological and Otological Society. The membership was about the same as that of the first organization with the addition of Drs. G. F. Hawley, H. M. Starkey, Bettman and John E. Harper. In 1889, this Society became inactive, not to be revived until April 12, 1892, when it was organized under the same title, to be changed to the Chicago Ophthalmological Society in 1903 when stricter division of the specialties became the vogue. The charter members of this final organization included Drs. G. F. Fiske, Samuel Jones, C. P. Pinckard, F. C. Hotz, Henry Gradle, C. A. Wood, Boerne Bettman, W. T. Montgomery, E. J. Gardiner, C. H. Beard, W. F. Coleman, J. E. Colburn, H. M. Starkey, Lyman Ware, W. A. Fisher, F. D. Stannard and Robert Tilley. Dr. E. L. Holmes was named President and Dr. Pinckard, who was largely responsible for the Society's revival, served as Secretary, a position he occupied for the first nine years. Dr. Holmes was re-elected President in 1894, followed by Dr. Hotz in 1895, Dr. Gradle in 1896, Dr. Montgomery in 1897, Dr. Coleman in 1898, Dr. Ware in 1899 and Dr. C. D. Wescott in 1900.

The list of charter members of the Chicago Ophthalmological Society and its predecessors brings forth the names of the most active Chicago eye physicians toward the close of the century:

*Dr. A. P. Gilmore* was born in Uniontown, Pennsylvania, in 1851, and received his M.D. degree from Jefferson Medical College in 1875. He practiced in Chicago from 1875 to 1894, and then retired from the profession to devote himself to real estate operations, in which he was eminently successful.

*Dr. Lyman Ware* (1841-1916) was graduated from the Chicago Medical College in 1866 and from Pennsylvania in 1868, beginning his medical education after the Civil War in which he saw service. He was on the Eye and Ear Infirmary staff from 1871 to 1889, and was also a staff member of the



Presbyterian Hospital and the Chicago Orphan Asylum. He translated Arlt's "Clinical Diseases of the Eye." According to one Chicago pioneer optician, Dr. Ware was fond of prescribing a  $+0.25$  sphere, which was changed to a  $-0.25$  sphere if it did not help the patient.

*Dr. J. E. Colburn* (1853-1927) came to Chicago following his graduation from the Albany (New York) Medical College in 1877. He joined the staff of the Cook County Hospital and the Illinois Eye and Ear Infirmary, and became Professor of Ophthalmology at the Chicago Polyclinic and the Chicago, Eye, Ear, Nose and Throat Hospital. He wrote several books on diseases of the eye, including "Clinical Lectures on Diseases of the Eye."

*Dr. E. J. Gardiner* (1856-1930) had his medical training at the Central University of Spain Faculty of Medicine, from which he graduated in 1878, at which time his father was Ambassador to Spain. During his long practice in Chicago, he was at one period on the staff of the Eye and Ear Infirmary and St. Luke's Hospital. He emphasized the use of the ophthalmoscope in measuring refraction.

*Dr. William T. Montgomery* (1843-1920) enlisted in 1861 in Company F, 33rd Indiana Volunteers, in which he served until the end of the Civil War. He received his M.D. degree from Rush Medical College in 1871, interned at the Cook County Hospital for two years, and engaged in general practice in Chicago from 1873 to 1888. He was appointed oculist and aurist to the Cook County Hospital in 1875, Professor of Ophthalmology and Otology at the Woman's Medical College in 1879, Surgeon to the Eye and Ear Infirmary in 1880, and was on the staff of the Presbyterian Hospital.

*Dr. C. H. Beard* (1855-1916) spent six years in general practice in Cannelton, Indiana, after his graduation from the University of Louisville in 1877. In 1883, he took an internship at the Manhattan Eye and Ear Hospital in New York, followed by study in England and on the continent. He began practice in Chicago in 1886, and for many years was one of the head surgeons of the Eye and Ear Infirmary and oculist at Passavant Hospital. In 1910, he published his textbook, "Ophthalmic Surgery." As an artist he was able to illustrate his own work. In 1908, he received a medal from the American Medical Association for his beautiful drawings of the fundus oculi. He was the father of Dr. Hallard Beard.

*Dr. John E. Harper* (1851-1921) received his medical degree from the University of the City of New York in 1878 and for many years was associated with the College of Physicians and Surgeons of Chicago as Professor of Ophthalmology and Otology. He was at one time editor of the *Western Medical Reporter*.

*Dr. Casey A. Wood* (1856-1942) was one of the most colorful and outstanding figures in ophthalmology of the period. He was born at Well-

ton, Ontario, of American lineage and English ancestry. He graduated from Bishop's College, Montreal, in 1877, and was in general practice for several years, holding the chairs of chemistry and pathology at Bishop's College. After several months of study in New York, he went to Berlin, Vienna, Paris and London, spending most of his time at Moorfields. On returning from Europe in 1882, he settled in Chicago where he rapidly acquired a large and lucrative practice. Appointed Professor of Ophthalmology at the University of Illinois, he later assumed the chair at Northwestern University. For a number of years, Dr. Wood was editor of the *Ophthalmic Record*, the *Annals of Ophthalmology*, and then helped to found the *American Journal of Ophthalmology*. Among his numerous contributions to the literature of the specialty, his paper on "Toxic Amblyopia" in 1896 became a classic. Author of several books, he edited the monumental "American Encyclopedia of Ophthalmology" and, in 1917, published the "Fundus Oculi of Birds," which had been one of his hobbies. He served notably in the First World War, being discharged as a Colonel. He retired from practice in 1920 to devote himself until his death in 1942 to writing and research. At the time of his retirement, the Chicago Ophthalmological Society honored him with a testimonial dinner. Always kindly to younger men, he was a great inspiration to and much beloved by them.

*Dr. William A. Fisher* was born at Connersville, Indiana, in 1859, and graduated from the University of Michigan in 1885. He was closely identified with the Chicago Eye, Ear, Nose and Throat Hospital where he served as President and Professor for many years, beginning in 1898. In 1909, he was appointed Professor of Clinical Ophthalmology at the University of Illinois. He was particularly interested in cataract surgery, on which he published several books and was informally known as "Cataract Fisher." He was a strong advocate of the Barraquer method of suction extraction.

*Dr. W. Franklin Coleman* was born in Ontario in 1838 and received his medical degree at Queen's Medical School in 1863 and the M.R.C.S. (England) in 1870. He practiced for a time in Toronto, then for seven years was "the only oculist in the twin provinces of New Brunswick and Nova Scotia." He moved to Chicago in 1885, and was one of the founders of the Polyclinic and Postgraduate Medical Schools. In the latter he was for many years President and Professor of Ophthalmology. His death occurred in 1917.

*Dr. George F. Fiske* (1860-1943) was a graduate of Yale in 1883 and for many years was attending oculist to Henrotin Hospital in Chicago, where he died at the age of eighty-three.

*Dr. Horace M. Starkey*, a graduate of the Chicago Medical College in 1878, taught ophthalmology at his alma mater for many years, finally as

Clinical Professor. In his later years he left Chicago for Rockford, where he died in 1923. He had served on the staffs of Cook County and Mercy Hospitals.

*Dr. Charles P. Pinckard* graduated from Harvard in 1889. He was the first Secretary of the reorganized Chicago Ophthalmological Society, and was attending ophthalmologist to the Michael Reese Hospital. He is said to have had great love of fine paintings.

*Dr. C. Gurnee Fellows* was a graduate of Hahnemann Medical College in 1885, where he later served as senior professor of ophthalmology and otolaryngology. Two other homeopathic graduates who were well known ophthalmologists were *Drs. Charles H. Vilas* and *William H. Woodyatt*. Dr. Vilas was appointed the first Professor of Ophthalmology and Otology at Hahnemann Medical College in Chicago, later becoming Dean of the Faculty and President of the College. Dr. Woodyatt came to Chicago in 1871, in which year he was appointed lecturer and the following year Professor of Ophthalmology and Otology in Hahnemann College. In 1876, he became Professor in the new Chicago Homeopathic College where he remained active, in spite of a large private practice, until his death in 1880. According to Dr. Wood, Dr. Woodyatt was regarded as one of the most reliable diagnosticians and ophthalmic surgeons in the West.

Among the other men to enter ophthalmology in Chicago toward the close of the century were Drs. William E. Gamble, Cassius D. Wescott, Frank Allport, William A. Mann, William H. Wilder, Oscar Dodd, William L. Noble, George F. Suker, Brown Pusey, Thomas Faith, G. F. Hawley and, at the very close of the century, Drs. E. V. L. Brown and Emanuel Snyderacker. The work done by this group falls almost entirely within the twentieth century rather than with the period under discussion so it is left for Volume III of this series to make note of their accomplishments.

In Chicago's early ophthalmologic days, it was not an uncommon thing for a man to establish an infirmary in connection with his practice. The one founded by Dr. Holmes along strictly ethical lines was to survive to become the Illinois Charitable Eye and Ear Infirmary. Another such institution was established by *Dr. John Burgess Walker* who was born in England in 1827 but came to America about 1830. He first practiced medicine in Rochester, New York. An advertisement in a Rochester newspaper of 1858 by J. J. Bausch and Company (later to become Bausch and Lomb), in recommending the high quality of their optical products, lists among their references Dr. J. B. Walker, Oculist. About 1862, Dr. Walker moved to Chicago, practicing alternately in Chicago and Ottawa, Illinois, at that time larger than Chicago. Under the terms of the lease of his home in Ottawa, it was required that the Indian tribe of Iroquois visit the home-



stead once each year. Since it was their custom to carry home all the dishes and eating utensils, tin dishes and inexpensive tableware were substituted on this occasion. In Chicago, Dr. Walker opened a drug store in the old McVicker Theater Building with medical offices above the store. The fixtures in the store, imported from England, were lost when the building burned in the Chicago fire. Dr. Walker was the father of seven sons: Godfrey, Walter, John Burgess, Sydney, Charles, Herbert and Alec, all of whom became oculists. Dr. Walker, Sr., was President of the Chicago Public Library in 1875. He died in 1902.

#### EARLY ILLINOIS OPHTHALMOLOGISTS OUTSIDE THE CHICAGO AREA

The history of ophthalmology in Illinois for the half century 1850 to 1900 is predominantly concerned with the Chicago area for the simple reason that outside Chicago, there were in the entire State of Illinois few well trained oculists who confined themselves to their specialty or to ophthalmology and otology before 1900. Most of them, like *Dr. A. C. Corr* of Carlinville, did both a general practice and special practice. Dr. Corr was President of the Illinois State Medical Society in 1897.

For many years one of the outstanding men of his section was *Dr. A. L. Adams* of Jacksonville. Born in Pine Hill, Ontario, in 1865, he was brought to the United States in 1867. He graduated from Bennett Medical College in 1886, and from the Physicians and Surgeons College of Columbia in 1889. While attending school in Chicago, he became a registered pharmacist and was in the drug business there for two years. In 1889, he moved to Jacksonville where he achieved a wide reputation. He served as oculist and aurist to the Illinois State School for the Blind beginning in 1892, and was at one time chairman of the Eye, Ear, Nose and Throat Section of the Illinois State Medical Society.

*Dr. William R. Fringer*, the son of a physician, was born at Shelbyville in 1863. After graduating from Northwestern University in 1888, he did postgraduate study in Boston, New York and London and, in 1892, settled in Rockford where he confined his practice to ophthalmology, and was the only one during that period in that section to limit his practice completely. He served a term as Trustee of the Illinois Eye and Ear Infirmary (1893-1899), and later served as chairman of the Eye, Ear, Nose and Throat Section of the Illinois State Medical Society. Dr. Fringer died in 1948 at the age of eighty-four.

One of the most colorful and controversial figures in Illinois ophthalmology was *Dr. Arthur E. Prince*, the son of Dr. David Prince of Jacksonville. He attended the Illinois College in Jacksonville where he received his bachelor's degree in 1874. Subsequently he registered in the Medical Department of the University of the City of New York which granted him

an M.D. degree in 1877, with honorable mention for proficiency and superior excellence for his thesis on "Transpiration." Following graduation from medical school, he joined his father at the Prince Sanitarium in Jacksonville, where he took over the work in eye, ear, nose and throat. His father had achieved some reputation in surgery in that field but wished to devote himself to general surgery, in which he had a greater interest. The son studied in Europe in 1879 and again in 1887, and in 1890, after the death of his father, he and his brother, Dr. John, moved the sanitarium to Springfield and called it the David Prince Sanitarium. This institution was equipped with operating rooms and beds for patients suffering from eye, ear, nose and throat ailments only, as Dr. John did his general surgical work in the general hospitals of Springfield.

Dr. Arthur Prince was possessed of an unusual personality. He was not only a skilled operator, but also a very ingenious individual whose ability led to the development of Prince's rule, forceps and cone for pasteurization. He was an enthusiastic and tireless worker who delighted in a waiting room full of patients and a full day in the operating room. Such a man was bound to have enemies, especially since he made a practice of visiting other cities in the state frequently, where he would see many patients and perform operations, much to the consternation and jealousy of the local specialists.<sup>5</sup>

Associated with Dr. Prince at the sanitarium in Springfield was Dr. Ninus S. Penick who had joined him while he was still in Jacksonville. Dr. Penick was still a medical student at that time, but after graduation from Northwestern University and Rush Medical College and postgraduate study in London and Berlin, he returned to the association. Dr. Penick remained associated with Dr. Prince until his death in 1928. While he never performed surgery, he participated in the activities of the sanitarium and did a great deal of work in medical ophthalmology and refractions.

Another man to enter practice in Springfield at the end of the century was Dr. Elmer Hagler. He graduated from the University of Michigan in 1890, remained at his alma mater for three years as instructor in eye, ear, nose and throat, and came to Springfield to practice in 1893. He was not well known for his professional activities but took a prominent part in community affairs.

The first man in Peoria to limit himself to eye, ear, nose and throat—and

<sup>5</sup> The writer had the pleasure of spending a day with Dr. Prince at his sanitarium in about 1900. On my arrival he apologized for having no surgery scheduled for that day, but as patients began to arrive, he examined them quickly and sent some to beds after advising surgery. By the end of the day he had done no less than seven surgical procedures. It is obvious that these patients did not have the careful and detailed pre-operative study currently followed, but this experience illustrated his forceful personality and unbounded enthusiasm.

in fact the first in that city to limit himself to any specialty—was *Dr. Paul Dombrowski*. He was born in 1856 and practiced in Peoria from 1885 until his death in 1904. He was widely regarded as an outstanding clinician and a leading member of the community who attracted patients from a wide area. His residence, a landmark in the city, now houses the Schlarman Home for Children.

*Dr. E. H. Bradley*, born in 1861 and graduated from Vermont in 1891, practiced in Peoria from 1892 to 1933, at first as assistant to *Dr. Dombrowski*. He was a strict follower of medical ethics and was regarded as a good clinician.

*Dr. C. H. Brobst*, born in 1864 and a graduate of the College of Physicians and Surgeons of Baltimore, practiced the specialty in Peoria from 1893 to 1937, and was one of the founders of the Proctor Hospital.

Others to practice the specialty in Peoria prior to 1900 included *Dr. P. A. Bandom* from 1885 to 1888, and *Dr. A. J. Kanne* from 1892 to 1937.

The pioneer ophthalmologist in Galesburg was *Dr. L. S. Lambert*, referred to in 1923 as the Nestor of the medical profession in that city. He began the practice of eye, ear, nose and throat in Galesburg shortly after 1866, where he continued in active practice for over fifty years. For some years he was a Trustee of the Illinois Eye and Ear Infirmary, and at one time served as the President of the Society of the 83rd Illinois, being one of two surviving members of that organization at the time of his death. He wore a goatee and always carried an umbrella. Once when asked why he carried it, he replied that it was because of the birds in the many trees of Galesburg.

*Dr. Lambert* was the only specialist in his field in Galesburg until 1892, when *Dr. Lawrence R. Ryan* opened an office. Born in Pontiac, Michigan, of Irish stock, he moved to Galesburg with his family when a child, worked for the Chicago, Burlington and Quincy Railroad as boilermaker for ten years, rising at the age of twenty-five to foreman. He then decided on an education, and attended Knox College and Jefferson Medical School, from which he graduated in 1888. After four years of study in eye, ear, nose and throat in Berlin and London, *Dr. Ryan* returned to Galesburg to practice. He helped organize the Galesburg Medical Society and the Knox County Medical Society, of which he was President in 1903. In 1896, he was a candidate for elector on the National Gold Democratic ticket. He had seven children, traveled widely, and after twenty years in Galesburg, moved to Santa Barbara, California, where he established a practice.

*Dr. H. E. Parry* graduated from Knox College in 1890, and in 1897 was appointed city physician of Galesburg. He practiced eye, ear, nose and throat until he entered the Army Medical Corps in World War I. After the war he remained in the Army, achieving the rank of Major.



For many years the leading eye, ear, nose and throat specialist in Joliet was *Dr. Harry Woodruff*. The son of early pioneers in the area, Dr. Woodruff was educated in the public schools of Joliet; in 1888, at the age of twenty, he graduated from the College of Pharmacy of the University of Illinois. After working in pharmacies in Joliet and Spokane, Washington, for two years and being encouraged by his mother to pursue a medical career, he entered the College of Physicians and Surgeons in 1890, where he received credit for one year because of his pharmaceutical background. He finished the one year internship at the Illinois Eye and Ear Infirmary in 1893, where he had come under the influence of Drs. Montgomery, Beard and Bettman. While he practiced the specialty in Joliet, he retained his affiliation with the Infirmary for over thirty-five years, for most of that time as chief of one of the eye services. He was an excellent teacher, kindly, and highly regarded by all his colleagues throughout the state. Extremely tall, Dr. Woodruff was possessed of considerable humility.

Very few adequately trained or qualified ophthalmologists were to be found in southern Illinois during the 1850-1900 period, although during that time trachoma was quite common and the cause of much industrial blindness in that area. One colorful figure who did practice eye, ear, nose and throat for some eight years was *Dr. Thomas Hall Shastid*. Born in Pittsfield, Illinois, in 1866, and the son of a physician, he attended the Medical School of Columbia University. He then transferred to the University of Vermont which granted him his M.D. degree in 1888. Postgraduate study in Vienna prepared him for his specialty which he carried out in conjunction with general practice in Pittsfield for two years. In his engaging autobiography "Tramping to Failure," he described how he left the practice of general medicine and eye, ear, nose and throat to enter Harvard, where he received an A.B. degree *cum laude* in 1893. Returning to Illinois, he practiced the specialty for a period in Galesburg, only to enter the law school of the University of Michigan where he received his A.M. degree in 1901 and his LL.B. degree in 1902. Then followed a period of practice of eye, ear, nose and throat in southern Illinois, ending his career in Marion, Illinois. He later moved to Duluth, Minnesota.

As might be inferred from this varied career, Dr. Shastid was interested in many things outside medicine, the most prominent of which was a plan for permanent peace. He was a prolific writer of both scientific articles and fiction, and was a principal collaborator in Wood's "Encyclopedia," to which he contributed some 3000 articles. From 1907 to 1912, Dr. Shastid held the chair of the Professor of the History of Medicine at the American Medical College of St. Louis.

## ACKNOWLEDGMENTS

Grateful acknowledgment is made to the following who have assisted in supplying material for this chapter: Drs. Watson Gailey, Edgar T. Blair, Warren Kreft, Robert Cannon, George H. Woodruff, A. A. Stonehill and E. V. L. Brown; Mr. Jacob Weinstein, Mrs. Amos Richardson, Mr. L. J. Flood and Mrs. W. R. Fringer. In addition to the references listed below, the catalogues of the various medical schools, the Chicago City Directories, the ophthalmic periods of the day, and personal communications too numerous to mention were found to be indispensable.

## BIBLIOGRAPHY

1. Gifford, Sanford R.: Ophthalmology Comes of Age. Founders Day Address, June 16, 1942. *Northwestern University Medical School Bull.* 16:161, No. 3, 1942.
2. Brown, E. V. L.: Edward Lorenzo Holmes. *Am. J. Ophthal.* 31:1473, Nov. 1948.
3. Lebensohn, James E.: Ophthalmology in Illinois, 1849-1949. *Ill. Med. Jour.* May 1949.
4. Wood, Casey A.: The early history of ophthalmology in Chicago. *Ophthalmology* 13:397, April 1917.
5. Hollenhorst, R. W.: Description of an ophthalmoscope for examining the retina in the living eye (translated from the original article by H. von Helmholtz published in 1851 by A. Forstner, Berlin), *Arch. Ophth.* 46:565, 1951.
6. Wood, Casey A.: *The Chicago Ophthalmological Society. History of the Society.* Published by the Society in 1950.
7. *Transactions of the Illinois State Medical Society from 1850 to 1899.*
8. *American Encyclopedia and Dictionary of Ophthalmology*, Casey A. Wood (editor), 1917, Chicago. Cleveland Press.
9. *History of Medicine and Surgery and Physicians and Surgeons of Chicago, 1803-1922.* Published under the supervision of the Council of the Chicago Medical Society, Chicago, The Biographical Publishing Corp., 1922.
10. *Who's Who in Chicago.* A. N. Marquis Co., 1905, 1911, 1917.
11. Hubbel, Alvain A.: *The Development of Ophthalmology in America, 1800-1870*, Chicago, AMA Press, 1908.
12. Shastid, Thomas H.: *Tramping to Failure.* Ann. Arbor, Michigan, G. Wahr, 1937.

## CHAPTER XIII

# OTOLARYNGOLOGY

BY ALFRED LEWY, M.D.\* AND FRANCIS L. LEDERER, M.D.†

### INTRODUCTION

THE specialties of otology and laryngology have different origins, for the early otologists were surgeons who were accustomed to use of the syringe, the scalpel and the trephine, and the early laryngologists were physicians who extended their interest and their knowledge to diseases of the chest. Rhinology is apparently the most ancient of the medical specialties for it was that of the earliest physician known, Seklet'enanch (about 3500 B.C.), a medical attendant of Sahura, one of the Pharaohs of the 5th Dynasty. A legend "He healed the King's nostrils" appears on a limestone slab depicting the physician and his wife.

Folk-lore, folk-medicine and the mores give numerous interesting references to superstitions, beliefs and a host of bizarre therapeutic interpretations. The Bible, the Talmud, and Chinese, Hindu and Greek anthology contain much of correlated interest. Hippocrates made significant statements indicating an unusual degree of understanding of clinical ear, nose and throat. Throughout history, classical descriptions of diseases and case histories reveal superior anatomic knowledge by those versatile geniuses like Leonardo da Vinci (1452-1519), Andreas Vesalius (1514-64), Bartholomeus Eustachius (1520-74), Gabriel Fallopius (1523-62), and the writings of Pliny, Papyrus, Hippocrates, Aristotle, Celsus, Aretaeus, Galen, Thomas Willis (1621-75), Joseph Guichard Duverney (1648-1730), Antonio Maria Valsalva (1665-1723), Giovanni Battista Morgagni (1682-1771), Domenico Cotugno (1736-1782) and Antonio Scarpa (1747-1832). Some of the anatomical interpretations and diagnostic criteria were somewhat crude and occasionally philosophy and superstition motivated the thought as well as the therapy. All of this makes interesting reading in the light of the knowledge which was to unfold with the ensuing centuries of intellectual activities in all branches of art and science.

\* Dr. Lewy is a well-known specialist in otolaryngology in Illinois. He has contributed many historical papers to medicine. For years he has taken a particular interest in general science and in the natural history of the State.—*Editor*

† Dr. Lederer is Professor and Head of the Department of Otolaryngology at the University of Illinois College of Medicine, from which institution he is a graduate. He was a protégé of his University predecessor, Dr. Norval Pierce. Dr. Lederer is well known for his medical contributions and his editorial work. He is a lucid and effective teacher.—*Editor*



Epochal strides and events having a direct or indirect bearing on otolaryngology were being brought to light during and immediately preceding the last half of the nineteenth century. Notable among them were the following:

- 1846 Discovery of ether as an anesthetic by Morton
- 1847 First use of chloroform by James Young Simpson
- 1849 Invention of ophthalmoscope by Helmholtz who also gave the world the theory of hearing
- 1853 Practical endoscopic tube introduced by Desormeaux
- 1854 Pasteurization of milk
- 1854 Indirect examination of the larynx by the mirror by Manoel Garcia, "the Father of Laryngology"
- 1857 Pasteur demonstrated truth of vitalistic theory
- 1860 Discovery of cocaine
- 1861 Speech center in brain discovered by Broca
- 1861 Teaching of laryngology began with Turck and Semeleder in Vienna
- 1867 Lister introduced antiseptics—pus became reprehensible instead of laudable
- 1868 American Ophthalmological and Otological Society founded
- 1869 *Archives of Ophthalmology and Otolaryngology* was the first special journal
- 1871 American Otological Society was founded
- 1875 Advent of the science of microbiology (Pasteur and Koch)
- 1877 Pasteur proved bacillar origin of anthrax
- 1879 American Laryngological Association formed
- 1880 Discovery of typhoid bacillus
- 1879 Invention of electric light by Edison
- 1880 Pasteur published results on attenuation of virus
- 1881 Pasteur rendered animals immune to anthrax
- 1882 Discovery of bacillus of tuberculosis by Koch
- 1882 Von Behring announced discovery of antitoxin for diphtheria
- 1883 *Journal of the American Medical Association* issued July 7
- 1885 Pasteur inoculated against rabies
- 1889 Discovery of bacillus of tetanus
- 1894 Typhoid vaccine made by A. E. Wright
- 1895 Roentgen discovered x-ray
- 1897 Discovery of vitamins by Eykmann
- 1898 Radium discovered by Curie
- 1899 *Illinois Medical Journal* began July 1

Specialization as regarded today is a relatively recent development, although Herodotus tells that "Egypt had medical specialists of the narrowest type, some devoting themselves to one part of the body and others to one disease only." Some felt that this was an exaggeration of the facts, although Homer declared that there were so many physicians in the country "that all Egyptians were physicians." However, the modern specialties arose as the knowledge of medicine grew in the 18th century, first the oculists, then obstetricians and gynecologists, followed by the aurists.

Specialized hospitals did not appear until the 19th century and special departments of general hospitals came after them. The first special hospital in England was Moorfields, founded in 1805, for the care of the eye and ear. The founder of Moorfields was John Cunningham Saunders (1773-1810), whose work "The Anatomy of the Human Ear, with a Treatise on Diseases of that Organ," illustrated by beautiful engravings, was published in 1806.

In all accepted practice in the nineteenth century, the eye and the ear were considered in association with one another in the specialist's rôle. As such it was common practice to do both. Held as an associated specialty also was laryngology and diseases of the chest, and not infrequently, diseases of children and ear, nose and throat diseases. That is why the departmental and catalogue listings of medical colleges were so frequently altered. It is obvious that many of the men identified with these specialties were so by choice and convenience and not always by training or adequate preceptorships.

Specialization came in for its share of the limelight in a paper by H. R. Guthrie of Sparta, Illinois on "Medical Education" (Trans. of the Ill. State Med. Soc. 1885, page 269). Pertinent remarks included "From the want of breadth and depth in our curriculum we, as one of the necessary results, are fostering specialism." He quoted Mr. Gladstone, the great premier of England on "the injurious effects of separating a part from the whole" when he said, "The besetting danger of our age is what is called the division of labor in the world of industrial production, and specialism in the field of medicine. These are excellent things in their way, but they have a tendency to dwarf and narrow the mind, which needs exercise for its faculties." Guthrie also quoted from an address by Professor Hodgen before the American Medical Association in 1881, "Still it cannot be denied that the early and exclusive study of the affections of a part, and that often a very small part of the body, has a tendency to narrow the intellectual grasp, and to cramp the powers of the man who yields to the influences incident to such partial and one-sided training. In the best sense, a specialist is a physician and something more; in the worst, and I fear the too frequent realization of specialism, he is something else, and something less than a physician."

#### THE MEDICAL COLLEGES AND OTOLARYNGOLOGY

While the annual catalogue of Rush Medical College for the session of 1849-50 lists such operations performed before the class as extirpation of tonsils, and a plastic operation for a deformity of the nose, and perforation of the tympanic membrane, at a time when the population of Chicago numbered over 23,000, there existed no department of ear, nose and throat.

In 10 years the catalogue listed opportunities students had to observe

removal of enlarged tonsils in 3 cases, a polyp of the ear, and 4 cases of nasal polyps. By 1867 there was a lecturer on the Diseases of the Eye and Ear, Dr. Edward L. Holmes (later to become Professor) and clinics were listed at the Chicago Charitable Eye and Ear Infirmary "which has been enlarged and furnished with all of the conveniences necessary for patients with diseases of these organs." E. Fletcher Ingals was Assistant to the Professor of Materia Medica in 1872 and two years later had a catalogue listing of "Diseases of the Chest and Physical Diagnosis." Roosa's von Troeltsch was the otologic reference book at Rush in 1872 as contained in its 32nd annual announcement. (*A Practical Treatise on the Diseases of the Ear, including the Anatomy of the Organ*, by D. B. St. John Roosa, M.D. Published by William Wood & Co., New York City, 1873.)

The very next year the format changed and the catalogue read University of Chicago, including Rush Medical College and Union College of Law. In 1880 Holmes was still Professor of Diseases of Eye and Ear and was listed for clinics at the Illinois Charitable Eye and Ear Infirmary on Peoria and Adams where 1600 patients were observed and 270 operations were performed. At the Central Free Dispensary, Dr. Ingals on Diseases of the Chest and Throat and Dr. W. T. Montgomery in the Eye and Ear were listed for weekly clinics. Dr. Ingals gave demonstrations on "The Use of the Laryngoscope in the Recognition of Diseases of the Larynx" and by 1883 was listed as Professor of Laryngology, this being under the head of "Special Departments." In 1884 the Presbyterian Hospital was completed with Drs. E. L. Holmes and Lyman Ware as attending ophthalmic and aural surgeons, and John A. Robison as attending physician for Diseases of the Throat. Dr. Ingals had a book listed on "Physical Diagnosis" in the 1882 catalogue and one in 1887 on "Diseases of the Chest, Throat and Nasal Cavities."

The 47th annual Rush Medical Catalogue of 1888 bore the caption of "The Medical Department of the Lake Forest University." By 1891, E. L. Holmes was not only still in the Eye and Ear saddle but was also a member of the Board of Trustees and President of Rush Medical College and E. Fletcher Ingals was a member of the Board as well as Professor of Laryngology (in 1892) and Practice of Medicine, and the following year he was Professor of Laryngology and Diseases of the Chest. He was assisted by Doctors John Edwin Rhodes, J. J. Tuthill, C. J. Whalen, and H. B. Hemenway. In 1894 E. Fletcher Ingals took on the additional duties of Registrar and by that year the Illinois Charitable Eye and Ear Infirmary had seen 5,000 patients a year and performed about 1000 operations. Rush was not affiliated with the University of Chicago until 1898.

The first annual announcement of the Hahnemann Medical College and Hospital of Chicago in 1860 stated "The student must be drilled in



those details which are to comprise his daily and hourly experience and remark in after life. His pathway is beset by briars and thorns which none but a skillful hand may teach him to shun. He is to be familiarized with disease, to be brought face to face with its every lineament; and taught the best method of averting its fearful ravages." They did not, however, mention otolaryngology other than to say "that the success of these lectures will be ample refutation of the libel upon Homeopathsists so currently circulated in certain quarters—that there are no good surgeons in the Homeopathic School."

In 1874 Chicago had a population of over 560,000. In that year the seventh annual announcement of the Bennett Medical College (that year they dropped Eclectic) had stated, "The ability of a physician to effect quick and permanent cures is his chief capital. Your success will determine your patronage. Your income will therefore be largely increased by selecting this system of practice, which, beyond all doubt, is the most rational and successful of the age. Very ordinary physicians seldom make less than 4 or 5 calls per day, while the better class average twice as many, even in healthy times. In sickly seasons, the number of visits made in 24 hours sometimes exceeds 50, which, at \$2.00 per visit, yield a revenue which ought to satisfy the most ambitious." Dr. Henry Olin was then the Professor of Diseases of the Eye and Ear and Dr. J. R. Duncan Professor of Diseases of the Heart, Throat and Lungs. The year before he was Professor of Diseases of Children! Into 1897 the Eye and Ear were kept under one division using books on the Ear by Roosa, Buck and Dench and the subjects of Rhinology and Laryngology separately using books by Sajous, Ingalls, Bosworth and Ivens.

The Chicago Homeopathic Medical College (organized in 1896) was in its 17th season in 1892 when Dr. J. H. Buffum was Professor of Eye and Ear and Dr. W. M. Stearns held forth as Professor of Rhinology and Laryngology. The latter was listed as giving "a very thorough course of clinical and didactic lectures upon the diseases and anomalies of the nose, pharynx and larynx, thoroughly demonstrating the local, internal and surgical treatment of the same to small classes of senior students." Recommended books for reading were Houghton, Winslow's "Otology," and Sajous, and Lennox Brown in Laryngology and Rhinology. The college merged with Hahnemann Medical College in 1904.

The first annual announcement of the College of Physicians and Surgeons of Chicago heralded the session of 1882-3 to commence Tuesday evening, September 26, 1882, and to continue for 24 weeks. From the first Dr. John E. Harper was Professor of Ophthalmology and Clinical Diseases of the Eye, with Dr. Boerne Bettman as Lecturer on Ophthalmology and Otology. However, in 1884 Harper's title was changed to Professor of

Ophthalmology and Otolaryngology. It was also in 1884 that Dr. Frank O. Stockton was named Professor of Diseases of the Nose and Throat for the Spring Course and by the time the 3rd annual announcement for 1884-85 came around, he was Professor of Laryngology, in 1886 becoming also the Recording Secretary. In the 7th annual announcement in 1888, Dr. Frank E. Waxham, who was Professor of Diseases of Children on the original 1882 faculty, was listed as Professor of Otology, Rhinology and Laryngology. Between Harper and Waxham there must have been a bit of jockeying for position because the former took on the Ear and the latter dropped it from his title two years later and the following year was not only Professor of Diseases of Children, but of Rhinology and Laryngology as well, in addition to his duties of Treasurer. Boerne Bettman was made Professor of Diseases of the Eye and Ear and Clinical Ophthalmology in 1891.

Medical education of this particular era can best be pictured by selecting a student of that day who was destined to become one of the leaders of American otolaryngology. He was Joseph Carl Beck, born in a village in Bohemia on September 26, 1870. He came to the United States at the age of 14, having only a slight and sporadic exposure to education. Working in a drug store and helping his brother Carl, who was a well educated physician, he was twenty when he decided to study medicine. Since he had neither high school nor college training, a Latin tutor was engaged to help him with his studies so as to prepare him to enter the Chicago College of Physicians and Surgeons in the fall of 1891. He states in his own autobiography (*Fifty Years in Medicine*, published by McDonough and Company of Chicago in 1949) "At the end of nine months (working as a clerk) in the drug store I was ready to enter medical school. The Chicago College of Physicians and Surgeons was chosen for me, both because my cousin, Harry L. Pollock, was already going to that institution and because the school was easier to get into than the other two large medical schools—Rush Medical and Northwestern. Besides these three medical schools in Chicago, there were some night schools, although these were not so well thought of. For instance, there was the Harvey Medical School, the Jenner School, and the Bennett Eclectic School; there were also two homeopathic schools, where there were always large classes." Beck further said, "At that time (when I matriculated) it was to be a three year course, but in 1894 the transfer was accomplished between the University of Illinois and the College of Physicians and Surgeons, and a four year course came into being. Thus, the class of 1895 had to take two additional semesters, arranged as summer courses, to make up the fourth year."

The Chicago Policlinic was founded as "A Clinical School for Practitioners of Medicine" in 1885. Its faculty was made up of leaders of medicine and surgery of that era, including Fenger, Senn, Henrotin, Church and

other luminaries. Dr. George F. Fiske was Professor of Otology, Moreau R. Brown Professor of Laryngology and Rhinology, E. Fletcher Ingals Professor of Laryngology and Rhinology and E. L. Holmes, who like the others held professorships elsewhere, he being professor of Eye and Ear at Rush Medical, where Ingals was head of Rhinology and Laryngology. In those days Professor Brown gave a special course in Intubation of the Larynx, and George Fiske in Surgical Diseases of the Ear, including the "Mastoid and Brain Adjacent Thereto."

In the 12th annual announcement of the Chicago Medical College in 1879, which was then the Medical Department of Northwestern University, there was no department of otolaryngology, but Dr. J. S. Hildreth was listed as having "charge of the Ward set apart for Diseases of the Eye and Ear, will give a Clinic in that Department every Saturday." This statement appeared in their catalogue from 1866 to 1870. This was apparently what was to become the County Hospital. In 1871, Dr. Samuel J. Jones was appointed Professor of Ophthalmology and Otology, where he remained for 20 years. In 1894 Dr. Henry Gradle had the title of Professor of General Etiology and Hygiene and Clinical Ophthalmology and Otology.

The Postgraduate Medical School and Hospital of Chicago was formed in or about 1889. In 1890 such names as F. E. Waxham, T. Melville Hardie, Boerne Bettman, Henry Gradle, J. Orlando Ducker, Alice Swing, Norval H. Pierce, Seth Scott Bishop in Ear, and T. Melville Hardie, G. P. Head, James T. Campbell, F. D. Owsley, B. M. Behrens and George Morgenthau were on its Nose and Throat faculty. J. Holinger, H. M. Ritter and Edwin Pyncheon were then listed as assistants. Pierce was listed as giving a clinic on Tuesday and Thursday from 4 to 5 and at Michael Reese on Monday, Wednesday and Friday at 10 AM.

Harvey Medical College was established as a four year's graded coeducational school in 1891. J. Homer Coulter was Professor of Rhinology and Laryngology and Jacques Holinger was Professor and Demonstrator of Otolological Surgery. Its first class graduated in 1895. The school became extinct in 1905.

In its 2nd annual announcement catalogue, Hering Medical College of Chicago in 1892 listed a quotation from Constantine Hering: "If our school ever gives up the strict inductive method of Hahnemann we are lost, and deserve only to be mentioned as a caricature in the history of medicine." Dr. L. A. L. Day was then head of Ophthalmology, Otology and Laryngology.

In an 1892 announcement of the Chicago Physio-Medical College, a statement under Ophthalmology and Otology reads: "There is nothing more satisfactory to the general practitioner than to be able to treat the simple so-called special diseases which generally fall into the hands of the



'specialists.' In some locations it is absolutely necessary that the family physician shall in a measure be a specialist. Hence, the importance of some knowledge of the diseases of the eye and ear can be realized. The teacher of this subject has spent many years in its practical application. He can bring to the classroom the best knowledge of the most famous oculists and aurists of the United States, since he has for some time been their pupil. He can also show from his own practice the superiority of sanative agents when used in connection with these diseases." Dr. H. J. Treat was Treasurer and Professor of Ophthalmology and Otology of this school where "the system of medicine taught in this College consists of principles founded upon unerring and unchangeable natural laws, the one and only basis of true science."

In 1899 Dr. Seth Scott Bishop was Professor of Nose, Throat and Ear at the Illinois Medical College, "The Chicago Summer School of Medicine" (as stated in its fifth annual announcement).

In 1895 Dunham Medical College was organized to follow the teachings of Samuel Hahnemann adopting the "Organon as its Therapeutic Guide" and recognizing the "Law of Similars" of the homeopathic school claiming it "will cure what is curable, that failures resulting in actual practice proves simply the limitations of human effort; that no law, natural or statutory, can be free from faults in execution." Dr. E. T. Allen was then head of Ophthalmology, Otology and Laryngology. Dr. P. D. Paul was listed in charge of the dispensary. The catalogue stated that students were admitted to the Illinois Charitable Eye and Ear Infirmary on payment of \$5.00.

The National Medical College and Hospital (a homeopathic institution) had in its 9th annual announcement (1899-1900) Dr. Paul Burmaster, Professor of Rhinology and Laryngology and Joseph Watry as Professor of Ophthalmology and Otology. Commenting on the Eye and Ear, "Last year the clinic of this department was one of the largest, if not the largest of the kind in the city. A great variety of cases embracing all forms of Eye and Ear diseases, combined with able instruction, have made this department attractive even to specialists." As to Nose and Throat, the catalogue stated "This important specialty will be in charge of a gentleman who thoroughly fitted himself for the position by study at Vienna and at other large medical centers of Europe." For textbooks in Laryngology and Rhinology, Kyle, Ivins, Ingals, Seiler and Bosworth were recommended.

In the National Medical College and Hospital annual announcement in 1895 an "improved hand pump compressed air apparatus, complete with spray tubes (atomizers) and rack," was advertised by the Chicago instrument firm of Haussmann and Dunn. Dr. David Duncan was then Professor of Practice of Medicine, Rhinology and Laryngology.

The National Medical University of Chicago was incorporated Au-

gust 22, 1891, as the National Homeopathic Medical College. It dropped the word "Homeopathic" from its name in 1895 and in 1900 took the above title. The first of its classes was graduated in 1892 and a class graduated each subsequent year until the school was declared not in good standing by the Illinois State Board of Health in 1909.

By 1893, Frank E. Waxham, who was Emeritus Professor of Rhinology and Laryngology at the College of Physicians and Surgeons (he was also Professor of Diseases of Children) had moved to Denver, Colorado, because of the illness of his wife, and Boerne Bettman remained on as Professor of Eye and Ear and Clinical Ophthalmology. Moreau R. Brown was the Professor of Rhinology and Laryngology. Instructors of that day were J. B. Loring, W. E. Gamble, Oscar Dodd, R. H. Brown and Charles F. Brown. In 1895 T. Melville Hardie appeared as Professor of Otology. W. L. Ballenger, destined to head the department, was then listed as Clinical Instructor of Nose and Throat. By 1900 Moreau R. Brown was Professor of Laryngology, Rhinology and Otology, Thomas Melville Hardie Clinical Professor of Laryngology, Rhinology and Otology, William Lincoln Ballenger Assistant Professor of Laryngology, Rhinology and Otology; Richard H. Brown, Henry W. Berard, James Moreau Brown, Frank A. Phillips and Edwin S. Antesdale were Clinical Instructors.

#### EARLY OTOLARYNGOLOGICAL LITERATURE IN ILLINOIS

An analysis of the medical literature for the years 1850 to 1900 presents an informative chronicle of the progress made in otolaryngology over that period. It is not intended here to cover all reports and papers; only the most significant contributions are referred to or reviewed.

Practically no papers of importance in this field appeared in the Illinois literature before the Civil War. In 1867 Dr. Edmund Andrews, a general surgeon, described an endoscope using a perforated mirror at an angle and obtaining bright illumination by passing a magnesium wire through a lamp flame. (Proc. Ill. State Med. Soc. 1867, p. 113.) It was used principally at that time in the bladder and vagina and to follow bullet tracks. From the illustrations in the article it was evident that it had been applied to the respiratory tract through a tracheotomy incision, which was then the approach to the lower respiratory tract.

A report on plastic surgery of unusual interest, made by Dr. David Prince of Jacksonville, Illinois, in 1867, showed illustrations of a pedicled forehead flap for reconstruction of the nose and an eyelid that are strikingly similar to modern technic. (Trans. Ill. State Med. Soc., 1867, p. 113.) Regarding ear reconstruction, Dr. Prince said that the application of expedients described for other parts rendered special attention to this organ unnecessary.

Dr. Samuel J. Jones early went on record in the belief that diseases of the ear seemed devoid of interest and that treatment was unsatisfactory to a marked degree. (Trans. Ill. State Med. Soc., 1870.) His interest in the specialty continued, however, and in 1871 he described a tuning fork test as follows: "A vibrating fork is placed on the forehead, and the tragus is pressed in; if this diminishes the loudness the tube is closed; if tragus pressure increases the loudness the tube is open. If air enters the tube and tragus pressure does not increase the hearing the prognosis is less favorable." (Trans. Ill. State Med. Soc., 1871.) He recommended the method of Hinton, of London, who irrigated the middle ear after paracentesis, the patient's mouth being held open so that the stream passed through the nose. Evidence of pain not otherwise definitely accounted for should lead to examination of the ear. Dr. Jones referred to "asperquillus" glaucus as a cause of otitis externa, and recommended sulfate of zinc and carbolic acid solution as treatment. In his hands strychnia had no effect in stimulating the nerves of special sense. He used chloracetic acid as local cauterly, and advised inspection of the membrana tympani and the use of the auscultation tube.

In 1871, in a review of progress in otology (pages 44-48 of the Trans. of Ill. State Med. Soc.) Jones made a number of interesting comments: "The usefulness of the ordinary tuning fork of musicians is becoming more extended as an aid in diagnosis. Next to inflating the Eustachian tubes, it is perhaps the most convenient mode of determining whether or not the tubes be closed. . . . The method of ridding the middle ear of its accumulation, by incising the membrana tympani, and thus syringing it, was practiced several years ago, but the stream was allowed to pass into the throat, making the process so disagreeable to the patient as to have aided in bringing the operation into disuse." He added that a newer way was to "force the stream in through the nostril and out the external meatus. . . . When such an authority as Troeltsch is led, by his belief that there are more ear cases than eye cases, and to assert, as his conviction, that not more than one in every three persons between the ages of 20 and 40 years possesses strictly normal hearing in both ears, we must feel convinced, that if the number be but one half as great as represented by him, their frequency entitles them to more study than is accorded them by the profession. As to their importance, we readily recognize the great disadvantage that persons labor under whose faculty of hearing has become greatly impaired, and to what extent they are disqualified for many of the vocations of life. The earnestness with which these sufferers plead for relief shows how deeply they feel their loss."

In the same year (1871) Dr. Prince presented a report of the Committee on Surgery in which he described a technic for repair of harelip and other plastic procedures. (Trans. Ill. State Med. Soc., 1871.) Also, Dr. Edmund Andrews presented a mouth gag similar to the modern Jennings gag. (Trans.



Ill. State Med. Soc., 1871.) These men were ever alert for things that were new.

An interesting report was contained in the Transactions of the Illinois State Medical Society in 1872. T. D. Washburn of Hillsboro (Report on Practical Medicine) stated, "That the practice of medicine has improved 50 percent in the last score of years, no one will deny; the facilities to examine the cadaver, the steady advance in pathology and physiology, the chemical analyses, the microscopic researches, and the multiplied and varied instrumental appliances for the examination and cure of disease, as seen by laryngoscopy (devised in 1854), the ophthalmoscope (devised in 1849), the endoscope (1806), urinometer, and test tubes, the use of the thermometer, the local anesthetic, and spray producing apparatus of the throat, larynx, and nasal passages, the hypodermic use of remedies, and the purer and more concentrated elements of materia medica, have all helped to elevate and improve both the diagnosis and treatment of disease in a wonderful degree." He further commented, "In this fast age (it was the year 1872), when originality, sensation and immediate power and results are demanded, and must be *shown*, let us modestly suggest that they will not be gained by the old or young practitioner, by hastily seizing every *new* remedy that comes to the surface, or adopting every new instrumentality, or accepting every new theory of disease or cure for same, from some medical luminary who has recently shot above the horizon." Then further: "The tardy growth of reputation, the necessity of a livelihood, the short road to competency and affluence which many others travel, these and other demoralizing influences require no ordinary nerve and moral stamina to resist."

In offering a report on progress of otology at the 1873 meeting of the Illinois State Medical Society (pp. 247-255), Samuel J. Jones stated, "The first American work on 'Diseases of the Ear,' at all worthy of the subject, appeared last year, of which Dr. Laurence Trumbull is the author. It is a work of great value, not only to the aural surgeon, but to the general practitioner as well. Another work, entitled 'On Aural Catarrh and Curable Deafness' by Dr. P. Allen comes to us from England, and is a valuable contribution in its restricted department of aural practice."

In the 1874 Transactions of the Illinois State Medical Society (page 165) Samuel J. Jones, in giving a report on otology said "it has seemed desirable to devote a portion of it to the ear, in health, before proceeding to consider its diseases. The physician is often asked, by the laity, what care is necessary for the ear in health; in general terms, the proper answer is, none. The ear, like the other organs of the body, is so organized that, in health, it will take care of itself. When any of its functions are so performed as to attract special attention, it is fair to assume that some abnormal condition exists, which renders it advisable that careful examination of the organ be made."

Then he discussed cerumen, the removal of foreign bodies from the ear, the injudicious use of the nasal douche, the need for differentiating a defect of the conducting from that of the perceiving apparatus, saving needless apprehension on the part of the patient in assuming all hearing loss is hereditary, mentioned total deafness following cerebrospinal meningitis "and another form of affection of the labyrinth called Maniere's (his spelling) disease." Jones made a plea for "postmortem examination of the labyrinth in fatal ones, to understand these mysterious cases." He discussed tinnitus aurium at length speaking of "the depression of spirits which occurs in persons who suffer . . . and, in several recorded cases, this is shown to have been the cause of suicide." He spoke of a new work by Professor Roosa of New York, "which has no equal in the English language."

By the year 1876, Dr. F. C. Hotz reported two instances of death resulting from aural disease. (Trans. Ill. State Med. Soc., 1876, p. 81.) He quoted Wilde who said "after purulent discharge from the ear has once set in we can never tell how, when or where it may end or what it may lead to." For a case of otogenic meningitis even leeches were placed on the mastoid bone. In commenting on the autopsy findings he stated "an excision—total or partial—of a carious petrous bone is, of course, not to be thought of; but scraping of the bone with suitable sharp spoons has suggested itself, and indeed has been practiced. (Wolf, Arch. of Ophth. and Otol., v. 1.) It may answer very well the beginning of caries, when the bone is very superficially eroded, but I believe no one would attempt or endorse the scraping of a bone so totally rotten as in our case. Here any operation would have been equivalent to hastening the fatal exitus." The second case was an acute otitis media in which phlebitis and thrombosis of the lateral sinus, pyemia and death ensued within a period of three weeks. Hotz said "The textbooks are remarkably silent about the question of phlebitis resulting from aural diseases; they content themselves with mentioning the bare fact, that patients sometimes die of pyemia in the course of suppuration in the ear." He quoted from Roosa ('Practical Treatise of the Diseases of the Ear,' 1873) and from Lebert (Virchow's Archives, v. IX, 1859).

Dr. H. Z. Gill of Jerseyville, Illinois, believed that the more common diseases of the ear were neglected by the general practitioner. (Trans. Ill. State Med. Soc., 1876.) In cases of otitis media he used warm applications and blisters to the back of the neck, paracentesis if the drum membrane bulged. He stated that if physicians would apply themselves, 19 out of 20 ear cases would not need an aurist! For earache in children he recommended painting around the ear with concentrated tincture of *Cimicifuga racemosa*.

In the 1876 meeting of the Illinois State Medical Society, Moses Gunn gave a report on surgery (page 101) in which he commented at considerable length on the complete extirpation of the larynx. His statement at the

outset, "Seven cases of this operation have been performed on the human subject, and we allude to them for the purpose of condemning the operation, except in remarkably rare instances, and to call attention to a very clever instrument (Trendelenburg's tampon-cannula) which has been used in the course of some instances when tracheotomy is resorted to. . . . But in malignant disease what is gained by extirpation? Certainly not a cure. Prolongation of life is undoubtedly achieved; but it is a question whether that prolongation greatly exceeds that which would result from simple tracheotomy. In the first case recorded, life endured six months after the operation, and was destroyed in consequence of recurrence of the disease. In the second, the patient was alive five months subsequent to the operation. In two others the reports were made after intervals of three months and one week respectively. The other cases died after a few days only had elapsed." The tube referred to had a balloon around it which could be inflated to prevent blood getting into the trachea!

In 1876, Jones is quoted by J. S. Williams in a Report on Diseases of Children (page 41), "Dr. Jones speaks highly of the turpeth mineral in croup, given early, and in case of febrile excitement he follows it with veratrum viride. These, he thinks 'will always cure, in spasmodic croup, and will pave the way for other measures in the pseudo-membranous variety, in which latter form *operate early*, or not at all.'"

"Postnasal Catarrh" was the title of a paper by Dr. William Porter of St. Louis (Ill. Med. Rec., 1878, p. 57), read at a meeting of the Illinois State Medical Society. He described syphilis of the nose with ulceration and polyps. Under chronic catarrh he described what appeared to be atrophic rhinitis.

In 1877 (Trans. Ill. State Med. Soc., p. 41) E. Fletcher Ingals, then listed as Lecturer on Diseases of the Chest and Physical Diagnosis in Rush Medical College, gave a paper on "An Improved Method of Performing the Radical Operation in Empyema," in which he described the use of an indwelling drainage tube in the chest. He stated in behalf of his technic that "This has the advantage over other methods usually recommended of occasioning but a trifling wound, and consequently slight constitutional disturbance from that cause . . . ."

At this same meeting (page 198 of the Transactions) Dr. S. O. Richey presented "Inflammation of the Middle Ear Following Inflammation of the Nares and Pharynx." He was certain that an important factor was "The influence of cold air which has not been warmed by previous passage through the nostrils" and recommended that good "results may be obtained by affording protection to the mucous membrane against the stimulating action of the air."

Also in 1877, H. Z. Gill (page 237) in his Report on Otology, implored the



practitioners to pay more heed to "aural catarrh, here used in its broad sense of inflammation of mucous membrane. To say that the more common diseases of the ear are too much neglected by the general practitioner, is to state a fact almost universally admitted." All of this "in order to prevent permanent loss of hearing, and in not a few cases, loss of life."

In a symposium on diseases of children (1878), Dr. Gill of Jerseyville, Illinois, listed 83 cases of tracheotomy for croup and diphtheria performed in the State of Illinois and gave the international history of the disease, beginning in 1576 and even quoting from Hippocratic times. (Trans. Ill. State Med. Soc., 1878.) The microscopic, chemical and histologic findings, together with the laryngoscopic appearance, were described. The prognosis was bad and only about 20 percent recovered. Dr. Gill attempted to differentiate membranous croup from false croup and from severe catarrhal laryngitis and laryngismus stridulous. He believed the membrane to be pathognomonic. Treatment was described in detail, divided into medical and surgical, including emetics, tonics and disinfectant remedies, steam inhalations, good nutrition and treatment of the fever with quinine. Externally he preferred hot applications, and advised tracheotomy relatively early. An illustration is presented of a trachea tube with cannula. This is a remarkably well-written article by Dr. Gill replete with historical data and common sense management. He followed up with another report of the surgical treatment in 1879 (page 113). He brought out startling figures of deaths from "croup" in Chicago, a total of 224. In 1875, 1876 and 1877 respectively 139, 276 and 136, a total of 775 in four years!

At this time Dr. J. P. Mathews of Carlinville, Illinois, entered into a discussion of the value and dangers of the nasal douche. (Trans. Ill. State Med. Soc., 1878, p. 210.) He apparently was not a specialist for he wrote, "This could, perhaps, be made more interesting and reliable had it been written by one who had made a special study of the diseases incidental to the nasopharyngeal cavities." He further stated "a proper appreciation of diseased conditions of the throat and nose is made obligatory upon every general practitioner. True, in large cities, it becomes an easy matter to turn over to the specialist any cases he does not choose to treat, but in a small city the size of the one it is my lot to reside in, the community expects and demands, almost omniscience of that human being termed the family physician." Matthews, however, underestimated his background for he had visited special clinics in New York and had read well his special subjects.

Dr. S. O. Richey, assistant aural surgeon at the Illinois Charitable Eye and Ear Infirmary, contributed an article on "Restoration of the Membrana Tympani," stimulating the perforation edges with silver nitrate. (Trans. Ill. State Med. Soc., 1878, p. 219.)

That interest in the entire field of otolaryngology was rapidly increasing

is well illustrated by the published articles for the year 1878. In addition to those noted above, Dr. Jones published two, the first being on "Affections of the Lachrymal Apparatus" and the second a report, "The Present State of Otology" in which his opening paragraph reads "Medicine and Surgery have profited by division of labor in science and arts. Otology, the once neglected field, has been benefited by such a division to a marked degree." (Trans. Ill. State Med. Soc., 1878, p. 225 and 234-244.) Here is a 20 page article, replete with 23 figures practically summing up the armamentarium and the technics known up to that time. Jones covered the literature very well commenting, "Scarcely a score of years has yet passed since all, except the coarser, anatomy of the ear was comparatively unknown; its diseases were scarcely understood, and what treatment of them there was proved most unsatisfactory to both patient and physician. Today finds this changed, and whilst much yet remains to be learned of the pathology and therapeutics of this important organ, it may truly be said that much has been accomplished."

In 1879 (Trans. Ill. State Med. Soc.) this versatile Jones not only gave reports on ophthalmology (pages 258-274) but also the one on otology (pages 275-290) in which he continued his outstanding summary of progress which he had given at the previous annual meeting.

Dr. W. T. Montgomery's report on otology (Trans. Ill. State Med. Soc., 1880, pp. 162-175) emphasized the importance of suppuration of the middle ear for the following reasons: its frequency, its important anatomic relations, effect on general health, danger to life, and offense to society. Of 493 cases treated by him at the Central Free Dispensary, Chicago, 174 were suppurative, while at the Illinois Charitable Eye and Ear Infirmary, of 719 cases of ear disease, 187 were suppurative. The treatment consisted of warm douches, leeches in front of the tragus to withdraw 2 or 3 ounces of blood, opium, chloral hydrate, potassium bromide, inflation following the Valsalva or Politzer method twice daily, treatment of the pharynx with 6 percent silver nitrate up to a saturated solution applied to the tonsils if they were involved. In chronic cases, irrigation with antiseptics was used, and if granulations occurred, silver nitrate fused on a probe was advised. Dr. Montgomery felt that in cases of perforation, Toynbee's artificial membrane was too irritating; he preferred placing small paper disks over the perforation, as recommended by Blake of Boston, which occasionally brought healing when stimulation had failed.

In discussing Dr. Montgomery's paper, Dr. Jones stated that suppuration of the ear should be of interest to the family physician who usually saw the case first. He advised relieving tension by the use of warm water douches, diaphoretics, aperients, arterial sedatives and paracentesis if the membrane was bulging. He called attention to the danger of overlooking ear complica-

tions in scarlet fever, and the lighting up of an overlooked chronic inflammation with fatal results or with deaf-mutism in very young children. Where no instruments were available, he used a home made speculum of white paper and a mirror with a little of the quicksilver scraped from the center.

Dr. Gill's interest in croup continued and in 1880 he reported on "The Identity or Non-identity of Membranous Croup and Diphtheria." (Trans. Ill. State Med. Soc., 1880, pp. 176-208.) He felt that no distinction could be made by microscopic or chemical examination of the membrane or by clinical manifestation, giving the world-wide knowledge of the disease to that period. As for "Tracheotomy in Croup and Diphtheria," Dr. E. W. Lee and Dr. Christian Fenger, surgeon and pathologist respectively, of the Cook County Hospital, reported between 30 and 40 cases with eight recoveries. (Trans. Ill. State Med. Soc., 1880, pp. 85-98.) They used a soft rubber inner tube but warned that the operation was somewhat risky. They mentioned a circular tracheal flap technic and sutures to hold the incision open as a substitute for the tube.

Dr. Hotz, in his report on Ophthalmology and Otology reviewed new books on the early diagnosis of phlebitis of the lateral sinus, malarial otitis, and mentioned the audiphone as a boon to the deaf, only to condemn it. (Trans. Ill. State Med. Soc., 1881, p. 168.) Dr. E. L. Holmes was of the same opinion.

Dr. E. Fletcher Ingals of Chicago in 1881 published a paper on "Laryngeal Tumors" with 12 illustrations, and 17 case reports of benign and malignant lesions. (Trans. Ill. State Med. Soc., 1881, pp. 190-215.) For cancer of the larynx he quoted Dr. P. Kock, "The skill of the surgeon is, in some cases, shown by the patient not dying under his knife." His records showed 20 extirpations, 2 only surviving or remaining free from recurrence. The following year he reported three cases of obstruction of the larynx and trachea, from one of which he removed a foreign body by tracheotomy. (Trans. Ill. State Med. Soc., 1882, p. 91.) He advocated prompt tracheotomy in croup.

Dr. Jones continued to be a frequent contributor to the literature of ophthalmology and otology. In 1883 he called attention to the need for early diagnosis and treatment of ear disease, to mumps and boiler-makers' deafness, quinine as a cause of hearing loss, but denied malaria as an etiologic factor in otitis. He mentioned the possibility of erosion of the internal carotid in suppurative mastoiditis, and advised opening and drainage of the mastoid in suppurative disease. Nonsuppurative progressive deafness was mentioned as well as deafness due to noisy occupations and "city life." He was one of the pioneers in this country to urge that deaf mutes be taught articulate speech and that sign language be abandoned.



In one of the leading works on "The Human Ear" by W. H. Winslow (published by Boericke and Tafel in 1882), Dr. J. H. Buffum of Chicago is reported to have closed tympanic membrane perforations with "pledgets of cotton smeared with cosmoline and kept firmly against the surface of the drum-head for several weeks at a time."

A remarkably thorough discussion was contained in a paper by E. Fletcher Ingals (Trans. Ill. State Med. Soc., 1885, p. 197) on "Recurrent Laryngitis and Obstruction of the Nares, or Ordinary Catarrh." Living near the shore and its greater frequency in men than in women because of "the common habit of smoking" and alcoholic stimulants came in for etiologic consideration. The recognition and management of mechanical obstructions, hypertrophic states, mucous polyps, and the deviated or thickened septum, are indeed the products of an unusually good clinical observer with a flair for inventive genius.

Dr. R. Tilley reported on the accidental severance of the chorda tympani nerve in curetting granulations in the middle ear, with subsequent loss of taste for bitter, sweet, salt and sour on the anterior part of the tongue on the same side. (Trans. Ill. State Med. Soc., 1886, p. 233.) This referred to an article in the *Archives of Otolaryngology*, Vol. XV by Schulte of Berlin and translated by Furst.

In an 1886 report on otology, W. T. Speaker of Mt. Morris, Illinois, opened his remarks by saying, "I presume there is no subject in the field of either medicine or surgery in which so much has been written as on this branch—Otolaryngology." (Trans. Ill. State Med. Soc., 1886, p. 246.) Of his own time he credited progress to Guyot, Beck, Waxham, Pilcher, Politzer, Moss, Trumbull and Roosa. His own report occupied itself mainly with discussions of inspissated cerumen and foreign bodies in the ear.

The same transactions of the Illinois State Medical Society (page 252) contained an article by S. S. Bishop on "New Methods of Treating Diseases of the Middle Ear." "These," he said, "attended with increased and perverted secretions, the surgeon often feels the need for methods more effectual than the old ones for evacuating this cavity." Instead of relying on "old methods of evacuation by injections into the middle ear, paracentesis of membrana tympani and inflation," he proposed that "the patient closes the mouth and nostrils and exhausts the air in the nasopharynx by a strong inspiratory act." He felt that secretions would be ejected through the eustachian tube into the pharynx.

In the 1885 Transactions of the Illinois State Medical Society (page 142) Professor Waxham discussed a paper by J. P. Matthews on tracheotomy and said: "Mr. President, I am convinced that in the case of stenosis of the trachea, tracheotomy may be performed successfully by introducing the tube into the larynx, leaving it *in situ* and allowing the patient to breathe

through this tube until the external opening closes." It is possible that in this he was describing what later became the practice of intubation.

In an article entitled "The Early History of Intubation of the Larynx in Chicago" (*Soc. Med. Hist. Bull.*, Oct. 1, 1911) Dr. F. E. Waxham, then living in Denver, said that the first intubation performed in Chicago and the first done in private practice was performed by him on April 19, 1885. He stated that Dr. O'Dwyer of New York had been able to save his infants in the Foundling Asylum from death by suffocation (diphtheria) but that they later died of toxemia or by extension to the respiratory tract, and that he had saved only one of the first fifty. In Chicago, four of the first eleven were saved, and eventually Dr. Waxham was able to save over 300 children. Most of his patients were seen almost in extremis and recovery from "membranous croup," as diphtheria was then called, was the exception in those days. His instruments were crude, but they represented the patient study, skill and genius of O'Dwyer. Dr. Waxham had never seen an intubation performed. He wrote: "In those busy days life was hardly worth living as far as any comfort, rest or pleasure was concerned." He often had eight or ten patients at a time and had to go to all sides of the city. Often after a long drive he had to return to replace a tube that had been coughed out, and he drove from Grand Boulevard to Western Avenue three times in one night to replace one. His patients were referred to him through the courtesy of other physicians; many of them were dead on arrival, and others were moribund. The above paper by Waxham is a classic and deserves special emphasis. It is one of the earliest and best accounts of intubation for diphtheria. It includes the experiences of doctors during the horse and buggy days and years before the discovery of antitoxin.

In 1887, E. Fletcher Ingals, then Professor of Laryngology, Rush Medical College; Professor of Diseases of the Throat and Chest, Woman's Medical College, Chicago, presented a report of a special committee on Diseases of the Throat and Nose. (*Trans. Ill. State Med. Soc.*, p. 182.) Here he discussed at length "Epistaxis" which he considered the effort of nature to relieve plethora. R. Tilley took issue and considered it "as an evidence of a weak point in the nose, which should be sought out and remedied."

In 1887 Dr. Seth S. Bishop of Chicago, described an operative technic for mastoid disease. (*Trans. Ill. State Med. Soc.*, 1887, p. 194.) Apparently this was not performed unless external swelling appeared. Three-fourths of his cases were cured and the other one-fourth had benefitted by surgery. He pointed out that Nature's method of disposing of diseased bone was slow and uncertain and did not prevent intracranial complications. In his technic the wound was closed, to which Dr. R. Tilley voiced his objections in discussion.

In 1888, Bishop presented a new pneumatic otoscope (page 121 of the

Trans. of the Ill. State Med. Soc.), which he devised that was "self-illuminating, not requiring the aid of a hand or forehead mirror." The instrument also had a bulb attachment which could provide passive movements of the drum. In the same article Bishop presented an improved tonsillotome which "reduces the painfulness of the operation by one-half; it divests the procedure of any danger of an accident to the operator or patient; it makes a skillful and easy operation possible with a minimum amount of experience." In addition he presented a self-retaining nasal speculum made of spring-wire.

On page 206 of the Transactions for 1888, Ingals was listed as Professor of Laryngology, Rush Medical College, and Professor of Diseases of the Throat and Chest, Woman's Medical College, Chicago, when he reported on "Chronic Rheumatic Laryngitis, or Chronic Rheumatic Sore Throat."

Dr. R. J. Mitchell, of Girard, Illinois, reported 21 cases of diphtheria with recovery. (Trans. Ill. State Med. Soc., 1888, p. 311.) He said there had occurred no death among his patients in ten years on the following treatment: quinine grains 30, hydrochloric acid drops 30 to 1 ounce of water sprayed in every 2 hours; tincture ferric chloride and quinine internally, followed by alcohol 1-6 or whiskey 1-3 and water ad lib!!

Dr. Ingals wrote of using a double tapered bougie tip for stricture of the esophagus. (Trans. Ill. State Med. Soc., 1890, p. 318.) He gave an unfavorable prognosis in strictures from burns, scalds, chemical causes and malignancy.

In the last decade of the 19th century, electricity, which was to play such a prominent rôle in the instrumentarium of the otolaryngologist, had not made itself felt. The time can best be identified by quoting from the description of examining technic in the book by Horace F. Joins (*Diseases of the Nose and Throat, A Text-Book for Students and Practitioners*, F. A. Davis Co., Publishers, Philadelphia, 1893), "For purposes of illumination ordinary daylight can be utilized, but, as this is usually too diffused, it is better to make use of the sun's rays or some form of artificial light. Gas-light furnished by an Argand burner is mostly employed, because it is more easily controlled; but it is not always sufficiently powerful for examining the trachea, when it may be necessary to employ electricity, magnesium wire, oxyhydrogen, lime, or some equally powerful illuminant. A very good light, as suggested by Sajous, is obtainable by dropping a small piece of gum-camphor into the tank of an oil-lamp. . . . A small incandescent lamp may be attached to the front of a head-band (photophore), by which the light is thrown directly to the point desired. This is more or less cumbersome (although now made of aluminum) and necessitates wire attachments to the battery or dynamo."



In 1891, "Acute Follicular Tonsilitis: Is It Infectious? Its Differential Diagnosis" was well presented by C. C. Hunt of Dixon (Ill. State Med. Soc., page 83) and learnedly discussed by E. Fletcher Ingals. In the same year J. H. Coulter of Peoria presented "Laryngeal Tumors" (page 275.)

The Transactions of the Illinois State Medical Society in 1893 contained an unusual number of contributions of significance. W. E. Casselberry of Chicago presented "Rhinitis in Children: Its Varieties, Causes and Treatment." "The Importance of Early Mastoid Operations in Acute Suppurative Otitis" by F. C. Hotz of Chicago was a report of 36 operations in an era when leeches were still part of the "medical treatment." J. F. Oaks of Chicago presented "The Differential Diagnosis and Treatment of Suppuration of the Accessory Cavities of the Nose." He apparently was much influenced by the European rhinologists of the day. J. Homer Coulter of Chicago wrote on "The Deflected Septum and Its Repair." Then finally, Henry Gradle of Chicago discussed the subject of "What Benefit Can Ear Patients Derive From Nasal Treatment?" He was reporting on the basis of 15 years of experience stating "all instances of diseases of the middle ear are the complications of previously existing naso-pharyngeal anomalies."

#### THE INSTITUTIONS

As the story of the times has unfolded, the men and their contributions to the otolaryngological literature have made mention of the clinics and hospitals where they worked. In the United States, such institutions as the Massachusetts Eye and Ear Infirmary (founded in 1822), the Manhattan Eye and Ear Infirmary, the Philadelphia Polyclinic and Graduate Hospital, the Chicago Charitable (and later the Illinois) Eye and Ear Infirmary (founded in 1858), the New Orleans Touro Infirmary (founded in 1876) and numerous private clinics furnished students with increasing opportunities for study and experience.

The saga of the Illinois Eye and Ear Infirmary has been told. Its rôle in the progress of otolaryngology and its contribution to the citizens of the State of Illinois has been tremendous. The institution had its ups and downs, but as "the outpost of the West" survived all. In its first year it had 115 patients (95 were eye and 20 ear cases). The Infirmary also served the wounded of Wisconsin, Indiana and Illinois during the Civil War. The institution was always in a financial jam and Dr. Holmes had to appeal to the state for assistance. It is interesting to note that it cost \$6.00 a week to board and house each of 25 patients in 1869. The state took over in 1871, the year it was destroyed by the great fire, and the institution was rebuilt on its present site. Interesting, too, is the fact that in 1891 they had but one nurse and 6400 patients.

The Common Council of the City of Chicago was having its difficulties

in determining the treatment of patients by homeopaths and allopaths in their petition for a new city hospital. "The Common Council evaded the issue by declaring the city too poor to make expenditures, requisite for the establishment of the hospital, and then, in 1858, leased the building to some 'regular' physicians who established therein a public hospital, cared for the county poor and gave clinical demonstrations principally to the students of Rush Medical College. In 1862 the General Government confiscated the building and transformed it into a general hospital, with Surgeon Brockholst McVickar in charge, and with George K. Amerman and J. P. Ross acting as assistant surgeons. The hospital was shortly afterwards changed in its scope of treatment, and soldiers afflicted with ophthalmic or auricular diseases were alone received there; Dr. Joseph S. Hildreth being in charge (August 23, 1864), the hospital remaining under his administration until the close of the Civil War, when it became the DeMarr Eye and Ear Hospital; subsequent to which it became the county hospital" (On January 1, 1866). (*History of Medical Practice in Illinois*, Zeuch, Vol. 1, page 241.)

The Illinois Asylum for the Education of the Deaf and Dumb at Jacksonville, Illinois, was the first state charitable institution in Illinois. It was created by an Act of the General Assembly on February 23, 1839. (A board of trustees functioned up to 1909 when a single State Board of Administration was created and was given supervisory powers. In 1917 the Department of Public Welfare took over the responsibilities. See footnote for laws pertaining, the year and page). It was not until 1846 that it was built and in operation with the admission of 13 pupils. By 1899 it had a census of 499. To it came pupils from Missouri, Iowa and Wisconsin. At its inception it was frequently referred to as "States folly." As with many similar projects of that day, they bore the name of "asylum," "deaf and dumb" and "charitable" in their titles. This was no exception, for until 1849 it was called the Asylum for the Education of the Deaf and Dumb. For a few years after 1869 there was one board of trustees for the Illinois institutions of the deaf and the blind and "other classes." The American Instructors of the Deaf held their first meeting in New York City in 1850 and in Jacksonville in 1858.

The first private school for the deaf in Chicago was the Ephephta School for the Deaf (1884), although the first day school was begun in 1874, and under the present school system in 1894. In 1883 there was established the McCowen Oral Home School for Deaf Children in Chicago (Englewood).

Laws: 1839 p. 164, 1847 p. 47, 1849 p. 93, 1851 p. 102, 1853 p. 90, 1855 p. 35, 1857 p. 34, 1869 p. 63, 1875 p. 104, 1887 p. 100, and 1897 p. 23.

THE RÔLE OF EARLY ILLINOIS DOCTORS IN OTOLARYNGOLOGY

In the 1880's, articles by Illinois specialists in otolaryngology began appearing in publications outside the state, and in the transactions of the various special societies. The influence of these men and the importance of their contributions to the specialty are further reflected in their election to specialty societies: Dr. E. Fletcher Ingals became a charter member of the American Laryngological Association in 1878, and its President in 1886; Dr. Moreau R. Brown of Chicago became a Fellow in 1892 and Dr. T. Melville Hardie in 1889. Dr. W. E. Casselberry, who became a Fellow in 1889, was its President in 1898. Dr. E. L. Holmes was the only Illinois doctor to be elected to membership in the American Otological Society at its first meeting in 1868 and later was made an honorary member; the next name to appear on the roster of this Society was that of Dr. Samuel J. Jones in 1875. For a number of years they were the only two members from Illinois, then Dr. Elliott Colburn was elected in 1892 and Dr. George F. Fiske in 1899. While the Chicago Medical Society was organized on April 19, 1850, Dr. Samuel O. Richey appears to be the only early member of this Society to specialize in ophthalmology and otology.

Following a plan devised by Dr. E. Fletcher Ingals, the Chicago Climatological and Otological Society was organized in January 1899 with the following charter members:

E. Fletcher Ingals, President	W. E. Casselberry	Frederick Menge
Moreau R. Brown	Otto J. Stein	Gustav Futterer
Arnold Klebs	Henry G. Olds	J. H. Coulter
Norval H. Pierce	E. T. Dickerman	Otto T. Freer
John A. Robison	W. L. Ballenger	Homer M. Thomas
Arthur M. Corwin	A. Solenberger	George E. Shambaugh
	John E. Rhodes	Otto Bridde
	Arthur R. Edwards	George A. Morgenthau
		James T. Campbell

As the society became interested more especially in ear, nose and throat, a number of these members who were primarily interested in diseases of the chest or in general medicine dropped out, and in 1905 it became the Chicago Laryngological and Otological Society.

Many of the men who achieved a reputation in otolaryngology toward the end of the nineteenth century really made their most notable contributions in the beginning of the twentieth. Brief biographies follow for some of the early leaders in this specialty.

BIOGRAPHICAL SKETCHES

It is interesting to note that one of the leaders of Illinois medicine, Ephraim Ingals, felt that information for biographical sketches was diffi-



cult to obtain. He therefore suggested, "All physicians should write their autobiographies, if only for their families. There are thousands of things of interest in the history and development of this new country which would prove profitable and interesting reading for us. Young men and old men should write their personal reminiscences and autobiographies, and put them where they can be found after they are dead and gone." (Trans. Ill. State Med. Society, 1891.)

Among the many otolaryngologists in Illinois, we can naturally list only short biographies of some. Many of their names have already been mentioned in other phases of the medical history of the state.\*

*William Lincoln Ballenger*, 1862-1916. Graduate of Bellevue Hospital Medical School; charter member Chicago Climatological and Laryngological Society; president Academy Ophthalmology and Otolaryngology 1902; professor Laryngology, Rhinology and Otology, College of Physicians and Surgeons; member of the International Otological Congress; author of a Textbook on nose, throat and ear which first appeared in 1900 and passed through nine editions.

*Seth Scott Bishop*, 1852-1923. Professor of Diseases of the Nose, Throat and Ear, Illinois Medical College and Chicago Post-Graduate School. One of the editors of the *Laryngoscope*; consultant Mary Thompson, Illinois Masonic and Silver Cross Hospitals (Joliet). Author of many papers and of "Diseases of the Ear, Nose and Throat" first printed in 1897, and which went through four editions. He contributed to the *Illinois Medical Journal*: Operations for Mastoid Disease (v. 87-194); Menthol in Diseases of the Air Passages (v. 90-34); New Method for Treating Diseases of the Middle Ear (v. 86-252).

*William Evans Casselberry*, 1858-1916, was a descendant of Benjamin Rush. He graduated from the Medical Department of the University of Pennsylvania in 1879; he did postgraduate study in Vienna, London and Berlin. He began his practice in Chicago in 1883, was Professor of Materia Medica at Northwestern Medical College until 1894; then became Professor of Laryngology and Rhinology. He was an attending surgeon in Laryngology and Rhinology at St. Luke's and Wesley Hospitals. Member and president, American Laryngological Association, president of Chicago Laryngological and Otological Society, Illinois and Chicago Medical Societies, Chicago Academy of Science, Chicago Tuberculosis Institute, National Institute for the Study and Prevention of Tuberculosis. He was a hard worker, rarely indulging in recreation.

*Henry Z. Gill*, 1831-1907, of Jerseyville, Illinois, A.M., M.D., LL.D.

\* For biographical sketches of Drs. Boerne Bettman, Henry Gradle, Joseph Sullivan Hildreth, Edward Lorenzo Holmes, Samuel J. Jones and Charles H. Vilas, the reader is referred to Chapter XII in this Volume.—*Editor*

Member of the Illinois State Medical Society. He translated a 656 page monograph on Diphtheria by Albert Sanne and added the surgical anatomy in 1887. His name appears in the Transactions of the Illinois Medical Society.

*Jacques Holinger*, 1865–1934, University of Basel, 1890, was Professor of postgraduate courses there from 1891 to 1893. Coming to Chicago, he was ear, nose and throat surgeon at Alexian Brothers, Grant and St. Joseph Hospitals and Associate Professor of Otolaryngology at the University of Illinois in 1921. He was a member of the Chicago Laryngological and Otological, Chicago Pathological Societies, and the Institute of Medicine of Chicago. He translated Bezold's textbook on otology. Most of his contributions were after 1900 and will be noted in the projected future volume of this history.

*E. Fletcher Ingals*, 1848–1918, graduated from Rush in 1871. From 1871 to 1873 he was Assistant Professor of Materia Medica, later becoming Professor of Diseases of Nose, Throat and Chest at Rush Medical College, also at Northwestern University and Woman's Medical School. In 1899 he was the organizer and first president of the Chicago Climatological and Laryngological Society, which in 1905 became the Laryngological and Otological Society. He was one of the important men in bringing about the affiliation of Rush Medical College with the University of Chicago in 1898. He was perhaps the first one in the West to practice peroral bronchoscopy, and his frontal sinus technic and drainage tube are still in use. His contributions to literature number about 150. His book "Diseases of the Chest, Throat and Nasal Cavities" went through at least four editions and was the textbook in use at Rush for many years. He was a charter member of the American Laryngological Association (1878) and its president in 1886.

For a number of years he was a senior associate Editor of the *Annual of the Universal Medical Sciences*, edited by Dr. Charles E. Sajous, himself a Professor of Laryngology and Rhinology at Jefferson Medical College. This was one of the earliest "systems" of medicine written by the outstanding men of the time. Ingals was always active in organized medical affairs. The Illinois State Medical Society was the recipient of many of his reports and papers. He served as its first vice-president in 1891 and as president in 1893. He had, incidentally, married one of Dr. Ephraim Ingals' four daughters. His last contribution was on angina pectoris, of which he died a month after it was written. In his last illness he continued to make notes thereon.

*Norval Harvey Pierce*, 1863–1946, graduated from the College of Physicians and Surgeons, Chicago (later taken over by the University of Illinois) in which he became head of the Department of Otolaryngology. He was also otologic surgeon at the Illinois Eye and Ear Infirmary and at Michael

Reese and St. Luke's Hospitals. He was fifth president of the Chicago Laryngological and Otological Society and later honorary president. He was also president of the American Rhinological, Laryngological and Otological Society in 1903, of the American Otological Society in 1918, and the American Laryngological Association in 1919. He also held membership in the Chicago Medical Society, the American Medical Association, the American College of Surgeons and the Institute of Medicine, Chicago. He served in the U. S. Navy during the Spanish-American War, and as Major in the U. S. Army in charge of otolaryngology in Chicago, Camp Grant and Vichy, France. [He retired in 1928 to indulge his hobby of scientific gardening, at Delmar, California. He died in 1946.]

*George Fuller Hawley*, 1844-1917, was a graduate of the New York College of Physicians and Surgeons, 1868; he was a postgraduate student in London and Germany. Later he became private assistant to Sir Morrell Mackenzie and of Woakes. In 1883 he came to Chicago, and became a staff member of the Chicago Chest and Throat Hospital, at the Eye and Ear Infirmary. He was editor of the Department of Laryngology of the *Western Medical Reporter*.

*Edwin Pynchon*, 1852-1914. By 1900 he had published 23 papers. Some of them were on general subjects. He was an ingenious inventor of instruments and new surgical technics; an early member of the Chicago Laryngological and Otological Society.

*John Edwin Rhodes*, 1851-1925, graduated from the University of Chicago in 1876 with an A.B., and A.M., and from Rush Medical College in 1886. He was laryngologist at the Crippled Children's Home, St. Mary of Nazareth and Cook County Hospitals. He was appointed professor of Laryngology and Otology at Rush after having served a number of years as professor of Physical Diagnosis and Diseases of the Chest at Woman's Medical College. He was a member of the American Medical Association, American Laryngological Association, Chicago Laryngological and Otological Society, the Institute of Medicine. He also was a first lieutenant in the M.R.C. Much of his work was in the 20th century.

*George E. Shambaugh* 1869-1947, graduated from the University of Pennsylvania School of Medicine in 1895. He made important contributions to the embryology and histology and blood supply of the internal ear and to the physiology of hearing. His most important work was in the 20th century. He was one of the charter members of the Chicago Laryngological and Otological Society and subsequently was president.

*Robert Tilley*, 1843-1898, graduated from Chicago Medical College in 1878. He was oculist and aurist at St. Luke's and St. Joseph's Hospitals, and a member of the American Otologic Society, the Chicago Ophthalmological and Otological Society.



*Frank E. Waxham*, 1853-1911, graduated from Chicago Medical College in 1878. In 1882 he was appointed to the faculty of the College of Physicians and Surgeons, in Diseases of Children, and in 1888 was given the chair of Otology, Rhinology and Laryngology. In 1885 he did the first intubation in Chicago, and the first in private practice. His experiences are described in the text above. He moved to Colorado because of his wife's health and became Professor of Rhinology, Laryngology and Clinical Medicine at the University of Colorado.

*The Plexus*, a student publication of the College of Physicians and Surgeons, contained an editorial on "Chicago As a Medical Center" (Vol. 4, March, 1899, page 284). It stated: "The Tribune of April 2, 1899, devotes a column to 'Chicago the Medical Hub.'" It goes on to state "that the bill known as the 'examination bill,' which recently passed the Illinois state senate and which makes it necessary for every person to pass an examination by a state board of examiners before he may be allowed to practice medicine within the confines of the commonwealth, will make Chicago the center of medical excellence. Chicago now leads all other cities in the number of regularly graduated physicians turned out annually. Greater New York with its million and a half more population is far behind Chicago in the number of graduates and Philadelphia, which fifteen years ago led Chicago in a ratio of nearly two to one, is far behind Chicago today. The reason for this is apparent when cognizance is taken of the fact that the medical educational facilities of Chicago are unsurpassed by any city in the world. The number and high character of the Chicago medical schools with their private hospital connections, as well as the Cook County Hospital which gives to students such a wonderful variety of cases, are great factors in keeping Chicago in the lead." Thus, at the turn of the century, this spirited statement indicated the past, present and future of medicine and otolaryngology in Illinois' great medical center.

## CHAPTER XIV

# DERMATOLOGY

By B. BARKER BEESON, M.D.\*

### INTRODUCTION

**D**URING the period 1850 to 1900, dermatologists were few and far between, and most patients with skin disorders were treated either by general practitioners or itinerant physicians. This early scarcity of skin specialists in Illinois is not surprising, since dermatology as a specialty was not introduced into the United States until 1836, when Dr. Henry Daggett Bulkley of New York City returned after studying at the famous Hôpital St. Louis in Paris in the service of Biett and Cazenave. Since dermatology in Illinois was limited for a long time to Chicago, this chapter in reality is a résumé of its history in this city.

### SKIN DISEASES IN EARLY ILLINOIS

The skin diseases recognized in Illinois during the period 1850 to 1900 were similar to those of today excepting those which newer diagnostic methods have identified since that time. Much pertinent information regarding the early skin disorders can be found in the first edition of James Nevins Hyde's volume on skin diseases and in his other early papers. His original book appeared in 1883, and the last one (of the past century) was published in 1897. Hyde adhered to Hebra's nine classes of skin disease: disorders of secretion; hyperemias; exudations; hemorrhages; hypertrophies; atrophies; new growths; neuroses, and parasitic disorders.

Among the common skin diseases of this region mentioned by Hyde were pruritus, urticaria, eczema, acne vulgaris, herpes simplex, herpes zoster, impetigo contagiosa, tinea versicolor, the nevi; ringworm of the scalp, beard and glabrous skin; scabies, pediculosis, erythema multiforme, lupus erythematodes, erythema intertrigo, epithelioma, and the syphilides.

The less common skin diseases were lupus vulgaris, scleroderma, morphea, leprosy, pemphigus, dermatitis herpetiformis, pityriasis rubra pilaris, mycetoma, mycosis fungoides, sarcoma cutis, ainhum, and pellagra.

\* Dr. Beeson graduated in 1906 from the University of Illinois College of Medicine. At present he is Professor Emeritus of Dermatology and Syphilology of Loyola Medical School in Chicago. Formerly he was an attending dermatologist at the Cook County Hospital and Consulting Dermatologist at several other city and state hospitals. He holds membership, honorary or corresponding, in several foreign medical societies. He has written for publication a number of history papers for local and medical journals.—*Editor*

## INTERNAL TREATMENT IN DERMATOLOGY

For internal treatment during this period, anodynes, aperients, cathartics and diuretics were commonly employed. The method of evaluation was chiefly by trial and error. Among the drugs in use, arsenic was the most popular; its reputation, however, was not always deserved. It was given chiefly as Fowler's solution, Donovan's solution and the Asiatic pill. Acne vulgaris, psoriasis, pemphigus and lichen planus were the chief disorders receiving such treatment.

Mercury by mouth was popular for the treatment of syphilis, being given as the protiodide, calomel and the gray powder.

Cod liver oil was recommended for infantile eczema, scrofula, lupus vulgaris, scleroderma and all wasting diseases. Thyroid extract was to be given, if at all, with extreme caution. Quinine was favored for its tonic effect.

Antimony was reputed to be valuable in psoriasis and obstinate eczemas, in small doses. Ergot found use in acne and purpura. Iron was indicated in anemia. Sulphur was given as calx sulphurata. Potassium iodide was frequently given for syphilis.

Tar, phenol, resorcin, turpentine, copaiba and phosphorus were, in Hyde's opinion, not only uncertain but even prejudicial remedies. He stressed the importance of a correct diet, personal hygiene, and the social environment of patients with skin diseases.

Dr. William B. Egan (1808-1860), a prominent early Chicago physician, was not averse to fostering a "blood purifier" which was very popular for some time. Known as "Dr. Egan's Sarsaparilla Panacea," it was recommended for debility, for skin diseases and for diseases affecting the bones.

## EXTERNAL TREATMENT IN DERMATOLOGY

Here again the method of evaluation was largely that of trial and error. Besides the usual baths, various substances were added to the water, such as starch, boric acid, sodium bicarbonate, marine salt, vinegar and bran. Superfatted soaps were considered valuable. Salves using vaseline as a base were popular, as were those to which cosmoline and lanoline were added. Collodion was used in certain cases. Lassar and Unna early advocated the use of pastes. Powders like McCall Anderson's were popular both as astringents and antipruritics. Crocker advised counter-irritation using sinapisms, blisters and caustics.

Of the tars, oil of cade, oil of juniper, olei rusci and oil of birch were perhaps most in demand. Hyde said that one's skill in treating skin diseases could be measured by his success in the use of tars. Ichthyol was favorably regarded but was not superior to the tars.



Resorcin, beta-naphthol and sulphur were prescribed in subacute and chronic dermatoses. Chloral camphor and phenol camphor were used as powerful antipruritics.

Caustic agents for localized destruction included the mineral acids, strong alkali solutions, acid nitrate of mercury, bichloride of mercury, silver nitrate, croton oil and tincture of iodine. Thermocautery was likewise employed.

For the treatment of lues, mercurial inunctions were popular, although some doctors preferred intramuscular injections of the bichloride. Mercurial fumigation had its advocates.

The instruments which formed a part of the dermatologists' armamentarium included dermal curettes, fine scissors, scalpels, comedo extractors, cutaneous punch, a glass for performing diascopic pressure, and a magnifying lens for studying skin lesions.

#### THE RISE OF DERMATOLOGY IN ILLINOIS

Although Dr. Charles Gilman Smith is considered by many as the pioneer Illinois dermatologist, having come to Chicago in 1853, the rise of modern dermatology dated from 1879 when Dr. James Nevins Hyde became Professor of Skin and Venereal Diseases at Rush Medical College. He soon created a large clinic at the Central Free Dispensary and induced other young men to take up dermatology as a career. Dr. William F. Robinson was his assistant for a number of years, and Dr. Frank H. Montgomery, following his graduation from Rush 1888 and up to his untimely death in 1908, was closely associated with Dr. Hyde. Dr. Ernest L. McEwen was another of Dr. Hyde's associates, both in private and clinical practice.

In 1879 and 1880, Dr. Lafayette W. Case lectured on skin and venereal diseases at Rush, and Dr. Eugene S. Atwood became an assistant in the skin clinic of the Central Free Dispensary. Dr. Robert D. MacArthur also taught at Rush and the central Free Dispensary at an early date. There were also Zeisler, Anthony, Baum, Montgomery, Campbell, Bishop, Schalek and Pusey among Illinois pioneers in dermatology, followed somewhat later by Lieberthal, Fischkin, Pardee and Simpson. Practically all of these men became teachers in our medical schools before 1900 and later held important hospital positions in this specialty.

Dr. Hyde was dermatologist to Michael Reese Hospital in 1883, and the next year he and Dr. MacArthur were on the dermatologic staff at the newly-opened Presbyterian Hospital. Dr. Montgomery later became a staff member there.

The Chicago Policlinic was opened on July 26, 1886; Drs. MacArthur and Anthony were the first dermatologists at this institution, followed later by Dr. Ralph R. Campbell.

The Postgraduate Medical School appeared on the scene in 1889, and Drs. Zeisler and Baum were its early dermatologists.

In 1895, Drs. Dennis D. Bishop and A. E. Evans were attending dermatologists to the Cook County Hospital, followed by Zeisler, Pusey, Campbell, Baum and L. Blake Baldwin.

Toward the end of the 19th century it was evident that the specialty was marching forward, as is illustrated by these additional appointments:

Dr. H. H. Latimer, Professor of Skin and Venereal Diseases, Bennett Medical College

Dr. John J. Quirk, Professor of Dermatology and Venereal Diseases, Illinois Medical College, 1898

Dr. W. M. W. Davison, Professor of Skin and Venereal Disease, National Medical College and Hospital of Chicago, 1898

Dr. L. Blake Baldwin, Lecturer on Skin and Venereal Disease, Chicago Medical College and Woman's Medical College

Dr. Joseph H. Greer, Professor of Medicine and Surgery, Genitourinary Diseases and Dermatology, College of Medicine and Surgery of Chicago, 1898

Dr. Julia Ross Low, Dermatologist to Mary Thompson Hospital, 1898.

Dr. J. Elizabeth Tompkins, Professor of Dermatology, Harvey Medical College. She succeeded Dr. Willis C. Stone who had held this appointment in 1896.

The period of 1850 to 1900 was one of steady progress in dermatology, and toward the end of the century several outstanding discoveries added much to the therapy of skin diseases: Roentgen discovered the x-ray in 1895; Niels Finsen from 1894 to 1897 established the value of ultraviolet rays in cutaneous tuberculosis; in 1898, the Curiés discovered radium, and one year later liquid air came into use, paving the way for Pusey's discovery of the application of solid carbon dioxide in skin therapy.

Illinois dermatologists did even more than their share by giving prestige to their specialty and by encouraging younger men to make a career of it. The establishment of Chairs of Dermatology, as well as positions on hospital staffs, contributed greatly to the strength of the specialty. Journals dedicated to skin diseases also improved. Dermatologic societies were formed and the Chicago Dermatological Society, the forerunner of all those in the Mississippi Valley, was founded in 1901 by Hyde.

#### PERTINENT BIOGRAPHICAL SKETCHES

As the pioneer in dermatology, it seems only fitting to head this list with a brief sketch of *Dr. Charles Gilman Smith*. He was born in Exeter, New Hampshire, on January 4, 1828. After receiving his preparatory education at Phillips-Exeter Academy, he entered Harvard Medical School but soon transferred to the University of Pennsylvania Medical School from which

he graduated in 1851. After practicing in Boston for a year, Smith came to Chicago in 1853 and soon acquired a large general practice.

During the Civil War he was one of six local physicians who cared for the Confederate prisoners at Camp Douglas.

In 1868, Dr. Smith went to Europe and spent some time in the leading hospitals of France, England and Germany, and it is possible that at this time he became interested in diseases of the skin.

In 1869, Dr. Smith was appointed to the attending staff in the Department of Venereal and Skin Diseases of the Cook County Hospital. In 1870, he became Professor of Diseases of Children in the Woman's Medical College of Chicago. He was also consultant to the Presbyterian Hospital as well as medical examiner for a number of insurance companies.

When the American Dermatological Association was organized in 1876, Dr. Smith became a charter member. He was President of the Chicago Literary Club and the Harvard Club of Chicago, and was a Trustee of Peck House for Incurables.

Dr. Smith had a wide acquaintance among men of letters, being a personal friend of Oliver Wendell Holmes. He was one of Chicago's best toastmasters, as well as an excellent presiding officer.

Dr. Smith was Chairman of the Committee on Arrangements for the 1887 session of the American Medical Association which was held in Chicago.

He died on January 10, 1894.

*Dr. Robert D. MacArthur* was born in Ontario in 1843. After graduation from McGill Medical College in 1867, he came to Chicago in 1871. Originally a specialist in skin and venereal diseases, he was affiliated with the Presbyterian, Polyclinic, St. Joseph's and Henrotin Hospitals, as well as with the Central Free Dispensary. Dr. MacArthur died October 24, 1922.

*Dr. James Nevins Hyde* was born at Norwich, Connecticut, on June 20, 1840. He received the bachelor's degree from Yale in 1861 and the master's degree four years later. He began the study of medicine in 1861 with Dr. William H. Draper of New York City. Hyde spent six years as a medical officer in the United States Navy, and was chosen to make the memorable post-Civil War cruise under Farragut which visited various European and Mediterranean ports. He received the degree of M.D. from the Medical Department of the University of Pennsylvania in 1869, and ten years later Rush Medical College conferred upon him an *ad eundem* M.D.

Hyde came to Chicago in 1873. He may justly be regarded as our pioneer dermatologist, both as a practitioner and a teacher. He taught at Rush from 1873 to 1876; transferred to Northwestern University where he remained until 1879, and then returned to Rush to spend the rest of his career. He had the title of Professor of Skin, Genito-Urinary and Venereal Diseases.



He was very active in the Rush faculty, serving for many years as Secretary of its Council of Administration as well as of the faculty itself. Later he became Professorial Lecturer on Dermatology at the University of Chicago.

With a large practice and abundant clinical material, Hyde soon became a frequent contributor to dermatologic literature. The first edition of his well-known text on dermatology appeared in 1883; eight editions in all bore witness to its well-deserved popularity. In at least three of these editions, Montgomery was the co-author. Hyde and Montgomery also contributed a book on syphilis and the venereal diseases which appeared in two editions, the initial one in 1895. Besides this, Hyde was the author of about 100 articles which covered a wide variety of subjects, including leprosy, lupus erythematoses involving the hands, bullous eruptions, sarcoma of the skin, prairie itch, smallpox, skin affections seen during cold weather, pemphigus vegetans, skin cancer, dermatitis occurring with exophthalmic goiter (with McEwen), the relations of certain dermatoses to each other and to vascular equilibrium (with McEwen), etc. He wrote extensively on blastomycosis with Montgomery, sporotrichosis with Dr. D. J. Davis, and mycetoma with Dr. Nicholas Senn. In 1879 he wrote a monograph entitled "Early Medical Chicago."

Hyde is credited with being the first to emphasize the influence of light as a causative factor in skin cancer and the first to describe synovial lesions in the skin. Hardaway of St. Louis in 1880 described a rare skin condition as multiple itching tumors of the skin; Brocq subsequently christened it lichen obtusus corneae, and Hyde called it prurigo nodularis, which name has been generally accepted.

He was attending dermatologist to the Presbyterian, Augustana and Michael Reese Hospitals and the Orphan Asylum of Chicago; consulting dermatologist to the Mary Thompson Hospital, the Home for Destitute Crippled Children and the Central Free Dispensary. A founder of the American Dermatological Association, Hyde served twice as its President and contributed much both to its programs and deliberations. He founded the Chicago Dermatological Society in 1901, and its first clinical meeting was held in his office. He was a member of the Congress of American Physicians and of the Chicago Vice Commission, an honorary member of the Italian Dermatological Society, and a corresponding member of the French, Vienna and Berlin Dermatological Societies. He was President of the Chicago Literary Club, and two of his addresses, "Asleep and Awake" and "Historical Strawberries" attracted wide attention. He was toastmaster at the banquet given during the International Dermatological Congress held at New York in 1907.

Hyde was outstanding both as a practitioner and a clinician, and had a

pleasing personality which made him deservedly popular. He died September 6, 1910.

*Dr. Frank Hugh Montgomery* was born at Fair Haven, Minnesota, on January 6, 1862. After completing his academic studies at the University of Michigan, he graduated from Rush Medical College in 1888, and soon became associated with Dr. Hyde. His postgraduate studies were undertaken at Johns Hopkins, Paris, London and Vienna. He became Associate Professor of Skin and Genito-Urinary Diseases at Rush and Professor of Dermatology at the Chicago Clinical School. He was attending dermatologist at Presbyterian, St. Elizabeth's, St. Anthony's and Kankakee State Hospitals.

Montgomery was very active in the American Dermatological Association, serving as its Secretary and Vice-President. He was also President of the Chicago Dermatological Society.

Besides close collaboration with Hyde in several books, as already mentioned, Montgomery made a number of important contributions. Among them were studies of German measles, pityriasis rubra of Hebra, white spot disease, and especially blastomycosis to which he devoted a number of papers.

A hard worker, an acute diagnostician and a skillful practitioner, his accidental death on July 14, 1908 was a tragic loss.

*Dr. Joseph Zeisler* was born in Bielitz, Austrian Silesia, October 7, 1858. He entered the Medical Department of the Vienna University in 1876 and received the M.D. degree there six years later. He was an intern in the famous Allgemeines Krankenhaus where much time was devoted to dermatology under Kaposi, then at the peak of his career.

Zeisler came to Chicago in 1884. Four years later he was Professor of Skin and Venereal Diseases at the Postgraduate Medical School, remaining there for seven years. In the spring of 1889, he was appointed Professor of Dermatology at the Women's Medical College of Chicago. Later that same year he was chosen Professor of Skin and Venereal Diseases at Northwestern University Medical School where he was active until 1917, when he became Professor Emeritus. During his active years he was attending dermatologist to Cook County, Michael Reese and Wesley Memorial Hospitals; President of the American Dermatological Association; Chairman of the Dermatological Section of the American Medical Association; President of the Chicago Dermatological Society and of the Physicians' Club of Chicago.

Zeisler contributed 36 articles to dermatological literature as well as several chapters in Morrow's "System of Dermatology, Syphilis and Genito-Urinary Diseases" which appeared in 1893. Other articles included those on multiple benign sarcoid of Boeck; prurigo nodularis; errors in diagnosing diseases of the skin; hereditary transmission of syphilis; carbon dioxide

in dermatology; angiokeratoma; pemphigus vulgaris; herpes zoster arsenicalis; cutaneous affections in relation to life insurance examinations; trophic dermatoses following fractures; tuberculosis of the skin; toxic dermatoses; actinomycosis; ichthyol in skin disease, and others.

Aside from his professional attainments, Zeisler was an accomplished linguist and musician, a brilliant after-dinner speaker and raconteur. He died August 31, 1919.

## BIBLIOGRAPHY

1. Bechet, Paul E.: An outline of the achievements of American dermatology arranged in chronological order. *Bull. Hist. of Medicine* 19:291-318, March 1946.
2. Zeuch, Lucius H.: *History of Medical Practice in Illinois up to 1850*. Vol. 1. Chicago, The Book Press Inc., 1927.
3. Hyde, James Nevins: *Early Medical Chicago: An Historical Sketch of the First Practitioners of Medicine with the Present Faculties and Graduates since their Organization of the Medical Colleges of Chicago*. Fergus Printing Co., Chicago, 1879.
4. Hyde, James Nevins: *A Practical Treatise on Diseases of the Skin*. Ed. 1, Philadelphia, H. C. Lea's Son & Co., 1883; Ed. 4 (With F. H. Montgomery) Philadelphia & New York, Lea Bros. & Co., 1897.
5. *History of Medicine and Surgery in Chicago*. Published by the Chicago Medical Society, 1922.
6. Lyman, Henry M.: A bit of the history of Cook County Hospital. *Bull. Soc. Med. Hist. of Chicago* 1:25-36, 1911.
7. Quine, William E.: Early history of Cook County Hospital to 1870, *Bull. Soc. Med. Hist. of Chicago* 1:25-36, 1911.
8. Pusey, William A., *The History of Dermatology*. Charles C. Thomas, Springfield, Illinois, and Baltimore, Maryland, 1933.
9. Rattner, Herbert: Pusey at Close Range, *Arch. Derm. & Syph.* 35:25-66, 1937.
10. *Chicago Medical Register*, 1878-1879.
11. *Chicago Medical Blue Book*, 1895-1898 inclusive.
12. Zakon, S. J.: The History of Dermatology in Illinois, *Ill. Med. J.* 105:77-80, 1954.
13. McCuskey, John M.: A History of Dermatology in Illinois up to 1940, *The Peoria Medical News*, May 1940.



## CHAPTER XV

# NEUROPSYCHIATRY

By OSCAR HAWKINSON, M.D.\*

**D**URING the early days of the Middle West, little was heard about the need for special care of the insane. The infrequent cases of mental disease, as in all other ills to which flesh is heir, were referred to the physician. However, population growth with its many types of personalities stemming from all parts of the world faced new and sometimes harsh problems which produced a troublesome increase in the number of insane, and the situation became acutely difficult. There soon came a time when a few men, for a variety of reasons, developed a special interest in this phase of the healing art and recognized the need for special training and facilities for the care of these unfortunates. Dr. Peter Bassoe has said<sup>1</sup> that "psychiatry preceded neurology for the simple reason that the troublesome presence of insane persons made it necessary to do something about them, and naturally physicians were called on for aid. At first the purely practical and humanitarian side of the problem absorbed all of the available energy, so the history of early psychiatry means the early history of dealing with the practical problems of insanity while scientific study came later."

### THE RÔLE OF THE ILLINOIS STATE MEDICAL SOCIETY

It has been said of medical men that their whole interest in life is the making of rounds, waiting on their patients, attending medical meetings, etc., to the exclusion of little pertaining to the public welfare. The record shows that this impression is far from the truth. Medical men have been exceedingly active in establishing institutions and organizing societies. The first Health Department in Illinois was created by physicians. Most of the spade work in establishing the first hospital for the insane in Illinois was done by physicians. In 1855, the Illinois State Medical Society moved to petition the legislature to provide more and better facilities for the care

\* Dr. Hawkinson, in his early years, was an active and competent neuropsychiatrist at the Lake Geneva Sanitarium where he served as an associate of its well-known Director, Dr. Oscar King. He has contributed many papers to his special field. The State and County Medical Societies of Illinois are obligated to him for his effective work in the several official positions he has occupied during his more recent years. Dr. Hawkinson is a graduate of the University of Illinois.—*Editor*

<sup>1</sup> Bassoe, Peter: *Early History of Neurology and Psychiatry in Middle West*, *Soc. of Med. History of Chicago*, 3:175.

of the insane of the state, and also to provide an institution for the profound mental defectives (idiots). In 1868, this Society decided to investigate what legislation, if any, was necessary to secure the rights and comforts of the insane who did not have the benefits of hospital care. In 1869, the Society considered for the first time the matter of legalizing the placing of the insane in institutions on certification instead of requiring a jury trial.

As the result of this preliminary work, in 1877 the Committee on Idiocy of the Illinois State Medical Society was able to report that a building to house and train 300 mentally defective children had been completed at Lincoln. The care of the criminally insane had for years been a troublesome problem for their custodians and, in 1890, the House of Delegates of the State Society discussed the possibility of separate accommodations for these persons. There was also a great deal of agitation at this time in arousing public interest to secure the best talent available to staff these institutions with men of scientific ability rather than with proper political affiliations.

The care of the epileptic, the mental defective and the insane had always seemed as much a social as a medical problem. Proper housing, activities, education and work were essential in themselves. In 1894, the Illinois State Medical Society endorsed and urged the establishment of a colony for these unfortunates. This was later erected at Dixon.

In 1895, the House of Delegates recommended that the State Legislature provide funds for establishing pathologic laboratories in all state hospitals for the insane, and discussed the study, classification, etc., of pathologic specimens so abundant in the state hospitals.

With the firm establishment of any branch of medicine, there follows in time the organization of specialty societies. So it was in this state with neuropsychiatry. The Chicago Neurological Society was organized at the office of Dr. Sanger Brown on January 5, 1898. He served as the first president; the other officers were Dr. Oscar A. King, vice-president; Dr. Sidney Kuh, recording Secretary; Dr. H. T. Patrick, corresponding secretary; Dr. Henry M. Lyman, Councilor. The first scientific meeting was held at the Grand Pacific Hotel on April 26, 1898 with papers by Drs. P. L. Holland and G. H. Lodor. The members during the first year numbered twenty, including in addition to the above Drs. P. L. Holland, M. L. Goodkind, Archibald Church, E. Wing, Otto L. Schmidt, Daniel R. Brower, J. J. Maugear, Henry M. Bannister, Nathan S. Davis, Jr., and J. G. Kiernan, and Professors H. H. Donaldson and Jacques Loeb.

#### THE RÔLE OF INDIVIDUAL PHYSICIANS

In the mid-1800's, there appeared on the scene in Illinois a number of individuals of commanding stature, both physicians and laymen, who had the genius and the drive to initiate a program for care of the mentally

ill. Characteristic of these men were their strong and energetic personalities. Being forceful individualists, they commonly moved about from city to city or from institution to institution. Wherever they went, they were sure to leave their impress upon the development of neuropsychiatry in a variety of constructive ways. On the whole, they constituted a group of brilliant and versatile men who in their field, were hardly matched by leaders in any other specialty.

For this reason it has seemed appropriate to present in this chapter the subject, in part at least, as a collection of individual studies, in reality short biographical sketches of nearly a score of these great men. Most of them were born outside the state and later moved into Illinois, some to continue there permanently; others, after a time, to move on to other locations.

Among these was *Dr. Edward Mead*, the first well recognized psychiatrist of Illinois.<sup>2</sup> Although he spent only about ten years of an active life in this state, his great influence continued through many decades. A somewhat detailed account of his background and accomplishments gives an excellent picture of his determination to improve the fate of these persons, in spite of opposition and innumerable obstacles, disinterest perhaps being the most difficult to overcome.

Dr. Mead was born in Leeds, Yorkshire County, England, on March 21, 1819. At the age of twelve he migrated to this country with his family and entered upon the study of medicine under the direction of Dr. Robert Thompson of Columbus, Ohio, one of the most influential physicians in that state. In 1841, Dr. Mead was graduated from the Medical College of Ohio and, in order to round out his education, he left for Europe to continue his studies. Upon his return from Europe, he had plans to locate in Cincinnati but relatives in the Chicago area urged he go farther west, which he did, settling in or near St. Charles, Illinois, where he had time to teach in the recently organized medical school and to carry on an extensive practice among the early settlers of this primitive area. His interest in the insane and their care continued, with the hope and determination that more could be done for the amelioration of a tragic and difficult situation. Soon he became actively interested in the establishment of a state institution for mental defectives at Jacksonville, Illinois, and claims have been made that he did almost all the work required to establish this hospital.

In 1847, Dr. Mead resigned from his professorship in the Illinois College and removed to Chicago. Here, in August 1847, he opened the first private hospital for the insane in Illinois. The records which he kept of his patients in this institution would indicate a systematic mind with careful attention

<sup>2</sup> Weaver, G. H.: Pioneer Neuropsychiatrist in Illinois: Edward Mead, *Bull Soc. Med. Hist.* Chicago, Vol. 3, p. 279, 1924.



to details. The fees for care in his hospital are of interest in these days of large figures: \$4.00 paid for the care of a patient for one week, or \$10.00 if better quarters and a separate attendant were required. Unfortunately, in 1851, one of his patients started a fire which consumed all five of the buildings. This loss, coupled with the opening of a free institution for the insane at Jacksonville, were the apparent causes of his abandoning the Chicago project. Soon thereafter he left Illinois permanently.

Further information concerning the establishment of the first state hospital for the insane in Illinois is somewhat at variance with the details given above and is furnished by Dr. Carl E. Black of Jacksonville, Illinois:<sup>3</sup> "It would be a mistake to lose sight of J. O. King, one of our most energetic and wide-visioned men. If any person is to be singled out and given credit above others for the success of this enterprise it should probably be Mr. King. He furnished the practical wisdom which assembled the various elements of education and influences necessary to achieve success. He brought Miss Dix<sup>4</sup> into the campaign; took her personally over a large part of the state to secure facts and landed her in Springfield to influence and handle the legislature. She thus had the opportunity of presenting the object of her mission. Very soon she presented a memorial to the Legislature asking for the establishment of a hospital for the insane. The Senate Committee, instead of reporting the bill which had passed the House, reported a new bill, prepared by the late Judge Constable, under the direction of Miss Dix, entitled 'An Act to Establish the Illinois State Hospital for the Insane,' accompanied by a report prepared by Dr. Mead. About this time, Senator Henry was elected to Congress to fill a vacancy and left the Senate. The bill provided for levying a special tax of 1/5 of a mill on the dollar for three years for the purposes of the institution. It passed the Senate 23 to 8, locating the hospital at Peoria. When it came up for consideration in the House on motion, Peoria was stricken out and Jacksonville was inserted. The rules were dispensed with and the bill passed. The

<sup>3</sup> Personal communication.

<sup>4</sup> Medical history would be far from complete did it fail to note the great influence that laymen have exerted in many branches of medicine. Occasions arise when medical men, to avoid misunderstanding or for fear their efforts might seem to have a selfish basis, hesitate to proceed in matters of good public health or good public relations. It is fortunate that in many such instances, enlightened laymen carry the light of exploration and knowledge into areas hitherto untouched and undisturbed. Several such persons have been mentioned in Dr. Black's account of the founding of the first hospital for the insane in Illinois, in which there appears repeatedly the name of Miss Dix. Dorothea Lynde Dix was born in Maine on April 4, 1802. In 1841 she became interested in the conditions of gaols and almshouses, investigating especially the treatment of the pauper insane. She visited many states in the Middle West, pleading for better care of the unfortunate insane. In 1843, though ill and indisposed at the time, she memorialized our State Legislature with an earnest and passionate entreaty for better facilities for the care of the insane in Illinois.

Senate on the same day concurred in the amendments. The bill passed the legislature March 1, 1847, and was almost immediately signed by Governor French. Within twenty days, the trustees purchased 160 acres of land at about \$2.00 per acre for the use of the institution, and during the summer and fall had the foundation of the building nearly or quite laid. Judge Thomas said, 'Miss Dix informed the Board that the plan of the hospital building then in the process of erection in Indiana was the best plan in the United States,' and in consequence the Board obtained a copy of that plan, which upon examination was adopted. The plan of heating at that time was by furnaces with hot air. Of the insane hospital, the first Board of Trustees was composed of Judge Thomas as President, Samuel D. Lockwood, Joseph Morton, Owen M. Long, Nathaniel English, William W. Happy, James Dunlop, James Gordon and Aquila Becroft. Dr. James Higgins was the first medical superintendent and served until about 1854. The real credit for the legislation which secured the hospital is perhaps due to a greater extent than to anybody else to the venerable Judge Thomas of Jacksonville who prepared the original bill for the location of the hospital for the insane; to Richard Yates who introduced it in the House and to the late Joseph Morton who, as a member of the House, zealously supported it. We accord this credit to Judge Thomas because he not only framed the bill locating the first institution at Jacksonville, but afterward, as a member of the House, was the leading and influential champion of similar measures as to other institutions, although he was zealously aided by other citizens of Jacksonville. The bill appropriated \$60,000 to erect the central building and one section on each side. The capacity of the institution was then rated at 250 patients."

Dr. Black further stated: "I would not have you think the biographical sketch of Dr. Mead gives him too much credit as the pioneer in the Mississippi Valley in the proper care of the insane. He certainly deserves full credit and it is a fine thing that you have secured so much reliable data on the subject. It is also to be greatly appreciated that Illinois College Medical School had the advantage of a year of his advanced ideas on this subject and the aid which his great fund of information and splendid spirit gave their enterprise. . . . It looks to me as though no individual was entitled to a principal measure of credit but rather that should be reserved for a group of public spirited and trained people . . . aided and guided by a strong group of medical men, of which the leaders were Dr. David Prince, Dr. Nathaniel English and Dr. William Long. . . . In the last analysis I should say that the credit for establishing the first hospital for the insane in Illinois should go to this group and not to any individual."<sup>5</sup>

<sup>5</sup> An account somewhat at variance with Dr. Black's statements occurs in Volume I (Zeuch) p. 408 of this series.—*Editor*

Among the earliest neuropsychiatrists in this state was *Dr. Walter Hay* who was a teacher and practitioner in Chicago for thirty-six years. Born in Georgetown, D. C., on June 13, 1830, he was educated in private schools and in the Jesuit College at Georgetown, and was graduated from the Columbian Medical College of Georgetown in 1853. In 1857, Dr. Hay came to Chicago where he taught and practiced until his retirement in 1890. In 1858, he was appointed physician-in-charge of St. James Episcopal Hospital in Chicago; he was one of the founders of St. Luke's Hospital and its first physician. In 1867, he helped to organize the Chicago Department of Health. The same year he became associated with Dr. J. Adams Allen in editing the *Chicago Medical Journal*. In 1871, Dr. Hay was Secretary of the committee that disbursed the Chicago Medical Relief Fund for those who suffered from the great fire.

At this time Dr. Hay organized the department of mental and nervous diseases in Rush Medical College, and two years later he established a similar department in St. Joseph's Hospital. In 1875, he helped to organize the American Neurological Society, and from 1885 to 1889 he served the Chicago Medical College as Professor of Neurology. In 1890, Dr. Hay retired to a farm near Annapolis, Maryland, where he died February 13, 1893.<sup>6</sup>

*Dr. Daniel Roberts Brower* received his degree from the medical department of Georgetown University, Washington, D. C., in 1864. He was commissioned Assistant Surgeon immediately after graduation and continued in hospital service until the close of the Civil War, when he became superintendent of the Eastern Lunatic Asylum of Virginia at Williamsburg. He served in this position until 1875 when he resigned and came to Chicago, limiting his practice to mental and nervous diseases. In 1877, he was appointed Professor of Nervous Diseases in the Woman's Medical College. In Rush Medical College he was a lecturer on the theory and practice of medicine from 1883 to 1889, and from 1889 to 1891, he lectured on mental diseases, materia medica and therapeutics. Dr. Brower was Professor of Nervous and Mental Diseases in the Postgraduate Medical School, and was neurologist at St. Joseph's and Cook County Hospitals. During his lifetime, Dr. Brower was a voluminous writer on neurology. He died on March 1, 1909.<sup>7</sup>

*Dr. Richard Smith Dewey*, born in Forestville, New York in 1845, received the degree of M.D. from the University of Michigan in 1869. After serving a year as resident physician at the Brooklyn City Hospital, he went

<sup>6</sup> Semi-Centennial Anniversary Volume of the American Neurological Association, 1924, p. 182.

<sup>7</sup> *History of Medicine and Surgery and Physicians and Surgeons of Chicago, 1803-1922*, p. 111.



to Germany to study, part of the time working in pathology under Virchow. On his return, he entered the state hospital service in Illinois, and from 1879 to 1893, served as Superintendent of the Kankakee State Hospital. During his administration visitors from all over the country were attracted there to observe the working out of new ideas, particularly the cottage system and non-restraint. To the eternal disgrace of Illinois, a political shift caused Dr. Dewey to leave the state service in 1893. However, he soon found fertile fields for his constructive ability and built up at Milwaukee an excellent private institution which he directed for twenty-five years.

Dr. Dewey was one of a group of talented, philanthropic and versatile men to whose vision and efforts was due the planning and organization of institutional psychiatric work in the Middle West. His classroom work was limited to postgraduate students where his excellent reasoning, sound judgment, sincerity of purpose and wide experience set a pace that probably has never been excelled. His knowledge of psychiatry and unquestioned integrity and good judgment made him a highly respected medicolegal expert. The list of his publications shows broad interest in the scientific, social, legal and administrative aspects of psychiatry. From 1894 to 1900, he was Professor of Nervous and Mental Diseases at the Chicago Postgraduate Medical School, and from 1894 to 1898 he was Lecturer on Psychiatry at the Chicago Detention Hospital. Following his retirement, Dr. Dewey removed to California, where he died in 1933.<sup>6, 8</sup>

Recently Pollack and Baer,<sup>9</sup> in a paper on the early institutional care of the psychotic in Illinois, among other noted persons, referred especially to Dr. Andrew McFarland of New Hampshire. It was he who succeeded the first superintendent, Dr. J. W. Higgins, of the Jacksonville State Hospital in 1854. The writers stated that the appointment of Dr. McFarland "marked the starting point of the modern era in the care of the psychotic in Illinois." His advanced ideas were handed down through an unbroken line of pioneer psychiatrists, "Frederick Wines, Dr. Richard Dewey, Dr. George Zeller, Archie L. Bowen, and others fructified further by these men." They call special attention to a "Conference on Insanity" which met November 10, 1869 and to which letters of inquiry were addressed to "every known superintendent of an asylum in the country." At this historic conference, Dr. McFarland "lashed out strongly against restraint" and carried the day. The Conference passed a resolution that "so far as practicable, a combination in insane asylums of the cottage system with that at present in vogue is desirable," and also that "there are weighty reasons for the belief that such a combination is practicable, and that it would increase both the economy and efficiency of asylums for the insane." Only after

<sup>8</sup> *Trans. Amer. Neurol. Assoc.* 60:224, 1934.

<sup>9</sup> *J. Hist. of Med.* 1953, Vol. 8, p. 56.

years of controversy did the Illinois Legislature authorize the construction of an asylum in 1879 at Kankakee where Dr. McFarland's plan was actually realized. Its first superintendent was Dr. Richard Dewey who together with his successors continued the application in principle of the plan in this State.

Dr. James Stewart Jewell was a splendid example of a man's ability to accomplish and round out a life of usefulness in the short period of fifty years. Dr. Jewell, the first presiding officer of the American Neurological Association, was born near Galena, Illinois, in 1837. He received his general education in the schools of his native town, and at the age of eighteen began the study of medicine under Dr. S. M. Mitchell. He attended his first formal course of instruction at Rush Medical College in 1858, and later studied at Lind University, where he received his M.D. in 1860.

For the next two years he practiced in Williamson County, Illinois, and then returned to Chicago to accept an appointment as Professor of Anatomy at Lind University. This position he retained until 1869, when he resigned with the purpose of studying and teaching Biblical history. He traveled abroad for two years in Palestine and Egypt, after having served during the Civil War as Contract Surgeon in General Sherman's command. When he reached Chicago in 1871, he resumed his medical practice and gave his attention to nervous and mental diseases. In 1872, he was appointed professor of this branch of medicine in the Chicago Medical College, and two years later he founded and became editor of the *Chicago Journal of Nervous and Mental Disease*. About one year before his death he founded the *Neurological Review*, but was compelled to discontinue its publication on account of increasing ill health. He contributed many valuable papers on neurologic subjects to this publication as well as to other medical periodicals. Probably no man in America at that time had a greater knowledge of the literature of neurology and psychiatry than did Dr. Jewell. He had by his own exertions become proficient in French and German and was thoroughly at home in the medical literature of these languages. He took great pride in his library, which was both choice and large and in which was to be found almost every recent journal or book of value in the branch of medical science to which he was most devoted.<sup>10</sup>

Dr. Jewell, engaged in promoting neurology as a specialty, was interested in the formation of the American Neurological Association in June 1875. He served the Association as President for three successive years after its founding. He was always deeply interested in its success and regularly attended its meetings, until failing health rendered this impossible. Dr. Jewell died after a lingering illness, in his fiftieth year, on April 18, 1887.<sup>6</sup>

<sup>10</sup> For further details concerning Dr. Jewell's library the reader is referred to Chapter XXII on "Medical Libraries" in this volume. *Editor*

Another early psychiatrist of Illinois was *Dr. Shobal Vail Clevenger*, versatile, a prolific writer, with a wide interest and experience in the affairs of men whether in the field of science, art, literature or the affairs of government. He was born March 24, 1843, in Florence, Italy, being brought soon after that to the United States. His medical education started when he began to read medicine with an Army Post Surgeon. He finally obtained his M.D. from the Chicago Medical College (Northwestern University) in 1879 and settled in that city as a general practitioner. Dr. Clevenger soon began to specialize in neurology and psychiatry and to write articles under these titles. In 1883, he secured the position of Special Pathologist to the Cook County Insane Asylum at Dunning and began to make case records and autopsies on the brains of the insane. The corruption which prevailed in such institutions was shameless and, although he was an appointee of the political machine, he began to expose the abuses in the *Chicago Inter-Ocean* but was unsuccessful in obtaining the cooperation of the press, pulpit, bar, clubmen, business men or any other group. He resigned when a pistol bullet imperiled his family, and devoted himself to private practice, serving for a time as neurologist to the Alexian Brothers and Michael Reese Hospitals. In 1884, his "Comparative Physiology and Psychology" was published, and in 1889, his classic work, "Spinal Concussion," gave him an international reputation. He lectured in various capacities at the Art Institute, a School of Pharmacy and Law School, but never held a chair in a medical college, although he received offers from eastern institutions.

In 1893, Governor Altgeld appointed Dr. Clevenger Superintendent of the Illinois Eastern Hospital for the Insane at Kankakee, and he planned great reforms in the treatment of the insane, based on the belief that insanity is often due to or aggravated by physical ailments. He gave up his private practice and hospital appointments for this work, but as he would not adjust himself to political exigencies, he was soon forced to resign and return once more to private life.

Dr. Clevenger wrote much and testified in many cases involving medical jurisprudence. He also maintained a large correspondence with eastern psychiatrists and brain specialists. Tiring of the city, he lived for many years in Park Ridge, Illinois. When finally he sought to resume his practice, it was without success and his last days were spent in straitened circumstances.

Dr. Clevenger had the usual defects of versatility. Numerous patented inventions brought him but little money. As a psychiatrist he was ahead of his time and popularized new concepts of mental disease, such as paranoia and katatonia. As a biologist he ranked high and added to the conception of evolution, especially in connection with the difficulty of man in adapting himself to the upright position. In his hatred of sham, he sometimes went



too far, as when he condemned certain neurologists for belief in the efficacy of electro-therapy. He was often inconsistent, for he testified in court cases while deploring the principle of factional expert testimony and fought the spoils system of which he was the beneficiary. His reform efforts were always single-handed and hence foredoomed to failure.

Dr. Clevenger died of a cerebral hemorrhage on his 77th birthday.<sup>11</sup>

While Dr. Clevenger was Superintendent of the State Hospital at Kankakee, a young neuropsychiatrist, *Dr. Adolph Meyer*, recently arrived from Switzerland, was recommended to him by Drs. Richard Dewey and Ludvig Hektoen. Dr. Meyer was retained in the hospital as a pathologist where he introduced new and useful methods in laboratory technic and, it is said, left a rich inheritance for those who followed him there. Dr. Meyer's work at Kankakee embraced the years 1893-95; at the same time he held a teaching appointment at the University of Chicago. In 1895, interesting and attractive opportunities were offered him by eastern institutions. These offers doubtless provided a greater opportunity for the use of his great talents than Illinois could provide. Illinois thus lost immediate contact with a great teacher whose influence, however, extended for many decades throughout the nation.

The death of *Dr. Henry Martyn Bannister* on May 1, 1920, marked the close of a life of ceaseless activity, even though fourteen years of invalidism had preceded the end. He was born in Cazenovia, New York, July 25, 1844. In 1871, he took his medical degree at the National Medical College, Washington, D. C., and began his medical practice in Chicago in 1874. At the very beginning of his medical career he became known in the field of neurologic and psychiatric literature, for with Dr. Jewell he founded and edited the *Journal of Nervous and Mental Diseases*, continuing in the position of Editor for seven years. He also was associated with other medical journals, and for many years preceding his death served on the editorial staff of the *Journal of the American Medical Association*. Beside his journalistic work, his editorial duties and the publication of many articles, he was the author of a number of larger works.

Dr. Bannister for many years suffered from arthritis deformans and, although for years confined to his home in Evanston and unable to walk, he continued the medical literary work in which he had always been engaged.<sup>12</sup>

*Dr. Harold N. Moyer* was born in Canajoharie, New York, August 14, 1858, and graduated from Rush Medical College in 1879. Almost immediately he became assistant physician in the Cook County Infirmary, the psychopathic department of which was then officially known as the

<sup>11</sup> *Dictionary of American Biography*, New York, Scribner, 1930.

<sup>12</sup> *J. Nervous & Ment. Dis.* 52:286, 1920.

"Cook County Crazy House." Early in 1881, he became assistant physician at the Illinois Eastern Hospital for the insane at Kankakee where he remained for about two years. On his return to Chicago, he opened an office on West Madison Street and returned to Rush Medical College in a teaching capacity. Here in rapid succession he was appointed Lecturer on Histology, Lecturer on and later Professor of Physiology and Assistant Professor of Diseases of the Nervous System; Adjunct and later Assistant Professor of Medicine. He was neurologist at the Central Free Dispensary and then Chief of the Neurologic Clinic. In the meantime he was also Lecturer on and later Professor of Nervous Diseases in the Postgraduate School, and Professor of Nervous and Mental Diseases in the Chicago Clinical School. He was also neurologist to the Cook County Hospital and for many years held clinics there. For a time he was Lecturer on Railway Medical Jurisprudence in the Kent College of Law.

In 1888, Dr. Moyer became County Physician, in which position he had charge of the Detention Hospital, now the Psychopathic Hospital. He never lost his interest in this institution and its inmates, and at the time of his death had been Chief of the Visiting Staff for ten years.

Early in his career, Dr. Moyer became interested and active in medicolegal matters. His temperament and tastes, his aptitude and training combined to make him effective and successful in this work so that he was the best and probably the best known medicolegal expert in Chicago. With the years, this work grew at the expense of his other practice and for some time prior to his death it constituted the major part of his occupation. During the later years of his life, his function was largely that of medical advisor to large corporations; he seldom appeared on the witness stand. As he had acquired an extensive knowledge of law and a wide experience of courts and juries, besides possessing an acute mind and a judicial temperament, he was an invaluable consultant in medicolegal cases.

Dr. Moyer began to write early; he wrote much and he wrote well, most of his articles being related to neurology, psychiatry and forensic medicine. For twelve years he was the editor of *Medicine*; his editorials invariably were brief and clear; sometimes trenchant; instructive, interesting or amusing, always readable.

From the time of his service at Kankakee, Dr. Moyer was known as a psychiatrist and neurologist, but he started as a general practitioner, accepting all work which a young physician could obtain. He acquired a good general practice and in time a good consultation practice. Although he became more and more renowned as a neurologist and psychiatrist, Dr. Moyer never lost interest in the problems and practice of general medicine.

*Dr. Sanger Brown* was born February 16, 1852, at Bloomfield, Ontario,

Canada. He was educated in the local schools, the Normal School at Toronto and Albert College at Belleville, Ontario. Then he went to Bellevue Hospital Medical College in New York City, and graduated in 1880. Shortly thereafter he was appointed assistant physician at the Hospital for the Insane, Ward's Island, New York, where he established a reclassification of patients which resulted in the discharge of many inmates and brought him into considerable national prominence. After other hospital appointments and a year of research work in London with Sir E. A. Schafer, Dr. Brown came to Chicago in 1890 and soon attained a prominent position in the profession. He was Professor of Medical Jurisprudence and Hygiene in Rush Medical College from 1892 to 1897. After 1897, he was Professor of Clinical Neurology in the College of Physicians and Surgeons. For several years he edited the *Chicago Clinical Review*, and for years was attending neurologist at Cook County, St. Luke's and St. Elizabeth Hospitals. The Chicago Neurological Society owes its beginning solely to Dr. Brown's vision and initiative.

Dr. Brown's numerous contributions to medical literature were mostly in the field of psychiatry and neurology. These articles were marked by clarity and simplicity of diction, obvious usefulness and broad common sense. His practice was marked by the same qualities. He was a clear thinker, quickly recognized the essential and was guided always by sound judgment.<sup>6, 13</sup>

Dr. Sydney Kuh was born in New York City on March 6, 1866. His early education was received in Germany. In 1885 he entered the Chicago Medical School; the following year he returned to Germany and in 1890 was graduated in medicine from the University of Heidelberg. Immediately thereafter he became an assistant to Professor Wilhelm Erb and, at his request, was assigned to the neurological wards. Under this master he did painstaking work for about two years.

In 1893, Dr. Kuh began practice in Chicago. Being the only man in the city properly trained in neurology, he promptly received recognition as a neurologist, which recognition he fully deserved and always retained. At once he was appointed neurologist to Michael Reese Hospital, a position he held until his death in 1934. There he did sterling pioneer work in organizing a real neurological clinic and for many years faithfully labored in the Outpatient Department.

Dr. Kuh was as well grounded in the field of psychiatry as in neurology, and for several weary decades he valiantly and patiently struggled to raise the standards of personnel and work at the old Detention Hospital.

A just estimate of Dr. Kuh's educational value to the profession and the public can never be made because he was so quiet, so unobtrusive, so reserved. But starting with a field almost fallow, by his unremitting efforts

<sup>13</sup> Proceedings of the Institute of Medicine of Chicago, Vol. 7, 1928.



backed up by his high ideals and unusual ability, he perhaps did more than any other man to raise the neurological threshold of the Chicago district. He was not a prolific writer, but his papers were brief, clear, very much to the point, evidenced accuracy and good judgment but were not entirely free from polemic. In meetings his discussions showed the same qualities, and he was adept at pricking neurological bubbles.<sup>14</sup>

At the close of the 19th century, there appeared on the medical scene in Chicago three dynamic teachers whose influence had much to do in guiding the teaching of neurology and psychiatry in the Middle West for many years: Oscar A. King, Hugh T. Patrick and Archibald Church. These men were vitally interested in the care of the mentally afflicted as well as work in the classroom. Their students, numbered in the thousands, carried their teachings throughout the nation.

*Dr. Oscar A. King* was born in Peru, Indiana, February 22, 1851. He began the study of medicine in 1873 under Professor Henry Palmer of Janesville, Wisconsin, a prominent surgeon of the War of the Rebellion. He also studied under Professor Louis A. Sayer of New York, and graduated from the Bellevue Hospital Medical College in 1878. After a short time in private practice with Dr. Palmer, he was chosen second assistant physician in the Wisconsin State Hospital for the Insane at Madison, Wisconsin. During 1880 and 1881, he studied abroad, devoting himself mainly to neurology and psychiatry. On returning home, Dr. King resumed his hospital work at Madison, but in 1882 resigned to accept the Chair of Mental and Nervous Diseases in the newly founded College of Physicians and Surgeons in Chicago where he had the honor of giving the first lecture in the medical curriculum. In 1894, his teaching title was changed to Professor of Neurology, Psychiatry and Clinical Medicine.

In 1883, Dr. King founded the Oakwood Retreat (for the insane) in Lake Geneva, Wisconsin, of which he was President and Chief of Staff. In 1896, he founded the Lake Geneva Sanatorium, and in 1901 amalgamated the two institutions and remained Director. At the time of his death he was Professor (emeritus) of Neurology and Psychiatry of the University of Illinois College of Medicine.<sup>15</sup>

*Dr. Archibald Church* was born in Fond du Lac, Wisconsin, March 23, 1861. He graduated in 1884 from the College of Physicians and Surgeons of Chicago. From 1884 to 1888, he served as attending physician and later Assistant Superintendent in the Northern Illinois Hospital for the Insane at Elgin. Returning then to Chicago, he became a member of the faculty of the Chicago Medical College where he lectured on Insanity and Medical

<sup>14</sup> *Trans. Amer. Neurol. Assoc.* 61:171, 1935.

<sup>15</sup> Cutler, H. G.: *Physicians and Surgeons of the West, Illinois Edition*, Chicago, 1900, p. 246; and *Illinois Med. Jr.* 40:350, 1921.

Jurisprudence. In 1893, he was appointed Professor of Mental Diseases and Medical Jurisprudence in Northwestern University Medical School. He served in this division for twenty-five years, in the later years as Chairman. He was also at this time Professor of Neurology at the Chicago Polyclinic and Hospital. His hospital connections included St. Luke's, Michael Reese, Wesley Memorial, Chicago Lying-In, Cook County and St. Bernard's, and he rendered special service as a consultant in neuropsychiatry to the U. S. Public Health Service.

Dr. Church contributed numerous scientific articles to the many societies in which he held membership, and to medical literature throughout the world. His writings encompassed the whole field of neurologic study. Probably his greatest contribution was the textbook on "Nervous and Mental Diseases," which has gone into its ninth edition.

Dr. Church's interest in civic affairs included membership on a special committee of inspection of the Cook County Institution for Mental Diseases, a committee of the American Institute of Criminal Law and Criminology, as an adviser to the Commissioner of Health of Chicago, and during World War I as a member of the Advisory Board of the Selective Service System.

In addition to his many great services to Northwestern University, Dr. Church, by means of his vision, practical assistance and continued interest, made possible the development of one of the greatest medical libraries of the country, which now bears his name.<sup>16</sup>

*Dr. Hugh T. Patrick* was born in New Philadelphia, Ohio, May 11, 1860 and received his M.D. degree from the Bellevue Hospital Medical College in New York in 1884. He began his practice in Chicago in 1886, after internship at Randall's Island Hospital, New York City. During 1891-94, he took post-graduate work in nervous and mental diseases in Europe, and throughout his life continued a friendly and scholarly contact with the leaders of English and European neurology. For a time Dr. Patrick was Professor of Nervous and Mental Diseases at the Chicago Polyclinic. He was appointed to the faculty of Northwestern University Medical School in 1895 as instructor, then advanced to Associate Professor, Professor, and in 1919 Emeritus Professor of Nervous and Mental Diseases.<sup>17</sup>

Since most of Dr. Patrick's distinguished career falls in the years after 1900, it is expected that Volume III of this series will devote some of its pages to the further details of his accomplishments.

This record of the history of neuropsychiatry in Illinois in the years

<sup>16</sup> Quarterly Bull. Northwestern University Med. School, Vol. 26, 1952; and Proc. Institute of Medicine of Chicago, October 1952.

<sup>17</sup> Proc. Institute of Medicine of Chicago, 12:324, 1938.

1850 to 1900 illustrates clearly that great projects do not materialize spontaneously or over night; that they require time and study on the part of those interested. The seed must be sown and time allowed for germination and growth. Many times those most active in the objective have passed from the scene before the time of harvest. It is with gratitude that we now record the accomplishments of those men and women of vision and foresight who early appreciated the need for specialized care for the mentally ill and who were untiring in their efforts toward that end.



## CHAPTER XVI

# PLASTIC AND RECONSTRUCTIVE SURGERY

By

FREDERICK W. MERRIFIELD, D.D.S., M.D.,

AND

WALTER W. DALITSCH, D.D.S., M.D. \*

**P**LASTIC surgery has been defined as "that specialty which deals with the restoration of defects, congenital or acquired, and improves both function and esthetic effect." (A. J. Barksy) The boundary lines of the specialty from the beginning were vague and for many years encroached upon almost every other surgical domain.

### REVIEW OF THE EARLY LITERATURE

In the early days of the period 1850 to 1900, plastic surgery played a minor rôle in the overall scheme of medical care. To appreciate its status as a rising specialty in the State of Illinois during this period, it is necessary to review the surgical literature. The *Transactions* of the Illinois State Medical Society contained few reports of corrective and reparative procedures, usually in connection with general surgery; direct references to plastic surgery, as such, were found rather infrequently, and descriptions of operations and procedures of a plastic character were often included as part of the annual Report on Surgery. The following chronological record illustrates the slow but gradual increase in interest and knowledge of this specialty, as reflected in the pages of the *Transactions* of the Illinois State Medical Society.

\* Dr. Merrifield, because of his training in the fields of dental and general surgery, is eminently qualified to present to the profession the borderland specialty of plastic surgery. He is Emeritus Professor in both fields at Northwestern University Medical School and holds positions on the staffs of several hospitals in Chicago. He is also Director of the Cleft Lip and Palate Institute of Northwestern University.

Dr. Dalitsch, a co-Director with Dr. Merrifield of the Cleft Lip and Palate Institute, has both the M.D. and D.D.S. degrees. He is a member of the surgical staff of Cook County Hospital and attending surgeon of several other Chicago hospitals. He is a member of the American Board of Oral Surgery. Formerly he was associated with the University of Illinois.—*Editor*

1860

One of the pioneers who early performed plastic operations in Illinois was Dr. Daniel Brainard. He was a general surgeon, there being no plastic surgeons at that time. His experiences in this field were noted in a paper entitled "Immobility of the Lower Jaw," treated by means of incising cicatrix bands and the use of specially devised instruments to separate the jaws.

There were also brief reports in this issue on removal of part of the lower jaw; removal of the jaw and extirpation of the parotid gland; cure of nevus by the use of collodion and ligature excision. For this latter condition the use of caustic, seton, injection and ligature of arteries was also considered. A unique treatment for spina bifida was presented, consisting of injection of a solution of 5 grains of iodine and 15 grains of potassium iodide in 1 ounce of water.

1861-1865

As might be expected, the experience of the surgeons during the Civil War was reflected in the literature. The Report on Surgery at the 1861 Annual Meeting was mainly concerned with military surgery; for example, 50 wounds of the head were summarized and, of these, 9 involved the face; 5 patients recovered, 1 died and 3 were in "a doubtful state."

1866

Plastic operations were recorded as a "method of treatment" on the eye, lip and nose.

1869

Dr. Moses Gunn of Chicago reported on staphylorrhaphy.

1871

A pioneer in the field of plastic surgery was the well known Dr. David Prince who edited a "Report on Plastic and Orthopedic Surgery," dealing with "flaps for transplantation from one part to another" and "the avoidance of cutaneous ulceration." He stated: "Dr. David Page, of Edinburgh has experimented by shaving off, by means of a bistoury or razor, thin layers of cuticle, superficial to the true skin, and brushing them from the blade of the knife upon the granular surface. A strip of adhesive plaster is laid over the cells thus transplanted." (See p. 170.)

1880

Dr. William Hill of Bloomington discussed rodent ulcer and "Epithelium Cancer," and cited the scraping procedure first done by Volkmann. He described three cases of his own, using the Volkmann method on rodent ulcer of the lips.

Dr. J. C. Harvey of Grove City described one of his own cases of extirpation of the parotid gland.

1882

Sponge grafting as a plastic procedure had its enthusiastic advocates. Dr. E. W. Lee of Chicago reported on this method used to cover the raw stumps of amputated fingers. Another supporter of the use of sponge to "grow" skin was Dr. D. S. Booth who also reported his results in this issue.

1883

"A cure of abscesses about the neck without cicatrix or other deformity" was described at this meeting, having been quoted from a paper by Dr. Quinlan of Dublin, Ireland, published in the *Lancet* of January 20, 1883.

1884

"Treatment of Lupus by Transplantation of Skin" appeared in the Report on Surgery, edited by Dr. Roswell Park, Professor of Surgery at Buffalo Medical College. Treatment consisted of first scraping the affected area with a sharp spoon and then applying grafts of skin  $\frac{1}{4}$  to  $\frac{1}{2}$  cm. in diameter.

Dr. David S. Booth of Sparta, Illinois, again reported on sponge grafting. He had three cases presenting marked loss of tissue which healed with results superior to previous methods. The sponge applications stimulated rapid growth of granulation and healing, and the wound remained cleaner.

1885

"Palatoplasty" was the subject of a paper by Dr. David Prince of Jacksonville. He used a "bead suture" to approximate the edges, and showed a case which he had operated upon. Dr. Prince believed early operation was better than vulcanite obturators to correct speech impairment. An interesting sidelight was his description of two needles for palate surgery which had "pick-up" devices, designed by Dr. G. V. Black of Jacksonville.<sup>1</sup>

1889

Increasing interest in reparative methods is shown in the Report on Surgery. Drs. L. L. McArthur, J. S. Miller and W. M. Barrett described

<sup>1</sup> At one time Dr. Prince operated a sanitarium or hospital in Jacksonville and advertised its merits in the medical publications. With the advertisement were two illustrations of a patient: one before treatment, showing the lower part of the face bound down by extensive scar contractions, and the other picture after treatment, showing a markedly improved appearance resulting from Dr. Prince's operation. Undoubtedly he was one surgeon of that time of whom it might be said that he gave special attention to cases requiring plastic procedures and, therefore, the appellation of Specialist in Plastic Surgery could truly be used to describe his field of endeavor. (See p. 207.)



Thiersch's method of skin grafting. Dr. McArthur stated that it was a useful method and merited his endorsement.

1891

Ailments affecting the face are considered to be in the realm of the plastic surgeon, and a discussion by Dr. Edmund Andrews on Rose's operation for tic douloureux should be mentioned. This appeared in the Section on Surgery, Surgical Specialties and Obstetrics. It was the first time such a title was used for this Section and indicated a growing recognition of "specialties" as being differentiated from the previous conception of the all-embracing "surgery."

1892

Dr. S. M. Wylie reported on "Laceration of the Perineum." Although this is more often considered a gynecologic problem, it is undoubtedly a restorative procedure and, therefore, comes within the realm of plastic surgery.

1893

"Burns and their Treatment" was the title of an article by Dr. C. W. Hall; he described the use of goose oil and advocated wax paper as an improved covering for burns. By the use of this treatment the acute pain caused by removing adherent gauze bandages was avoided, and the wax paper permitted observation of the burned area without disturbing the lesion. From our present point of view and considering the cycles through which the treatment of burns has passed, Hall's method of management would appear to have had a logical basis.

Dr. J. H. Etheridge of Chicago read a paper entitled "Split Flap Operation," which described a method for repositioning perineal tissues which had healed in an abnormal transverse position following a linear tear. This plastic operation was first devised by Tait of England.

A third article of interest in this issue was written by Dr. J. Homer Coulter and entitled "The Deflected Septum and its Repair." The causes, effects and treatment were considered, and a type of submucous resection by elevating one flap was described.

1894

"Stomatitis Materna" by Dr. C. B. Johnson was a discussion on the condition known as nursing sore mouth. He stated that it occurred during menstruation as well as in pregnancy and in the puerperium. This subject was of special interest both to the oral surgeon and the obstetrician.<sup>2</sup>

Again illustrating the truth of the statement that plastic surgery en-

<sup>2</sup> For further details on this subject, the reader is referred to Chapter IX in this Volume.—*Editor*

croaches on almost every other field of surgery, attention may be called to "Emasculation and Ovariectomy as a Penalty for Crime and the Reformation of Criminals." This surgical approach to an important social problem was the topic of a paper by Dr. Robert Boal who urged the surgical unsexing of incorrigible criminals convicted of offenses that indicated constitutional depravities transmitted by heredity. He advocated the operation as being both expedient and practicable.

1895

The above topic must have been of considerable current interest because at this meeting a paper was read by Dr. A. C. Corr under the same title.

More pertinent to plastic surgery, however, was the Address in Surgery by Dr. Duncan Eve which was a thorough discussion of suturing methods for incised wounds. He cited the advantage of approximating deep structures first, and then the use of a running subcutaneous suture for accurate skin closure. "In wounds of the face or hands . . . the most beautiful cosmetic results are produced with this suture" was his enthusiastic conclusion.

A little farther from the field but definitely a plastic surgery procedure was Dr. J. W. Standley's "Exstrophy of the Bladder and Epispadia: The Exstrophy Successfully Treated by Plastic Operation after Wood's Method, the Operation for Epispadia a Failure." Thus we have a completely descriptive, even if a somewhat lengthy, title.

Aside from these articles published in the *Transactions* of the Illinois State Medical Society, general subjects were discussed elsewhere as follows:

Dr. Truman Brophy reported a case of "Caries of the Superior Maxilla" in 1880.<sup>3</sup> In 1881, Dr. T. L. Gilmer, writing on "Fractures of the Inferior Maxilla" <sup>4</sup> discussed mandibular fractures and the paper was illustrated by 40 drawings executed by the versatile and distinguished Dr. G. V. Black. "Facial Neuralgia" <sup>5</sup> was an intriguing problem presented in 1899 by Drs. Gilmer and Brophy, and subsequently in 1900, Dr. Gilmer reported on a "Case Operated Upon for Trifacial Neuralgia." <sup>6</sup>

A practitioner of oral surgery in Chicago at that time not well known was Dr. H. H. Schuhmann who published a paper on "Early Diagnosis and in Brief, Treatment of Tumors of the Jaw." <sup>7</sup> He discussed in detail the diagnostic aspects of benign and malignant tumors of the jaws and was

<sup>3</sup> Brophy, Truman: Caries of the superior maxilla, *Chicago Medical Journal & Examiner*, December 1880.

<sup>4</sup> Gilmer, T. L.: Fractures of the inferior maxilla, *Proc. Ill. State Dental Society*, 1881.

<sup>5</sup> Gilmer, T. L., and Brophy, T.: Facial Neuralgia, *Proc. Ill. State Dental Society*, 1899, p. 119.

<sup>6</sup> Gilmer, T. L.: Case operated upon for trifacial neuralgia, *Proc. Ill. State Dental Society*, 1900, p. 175.

<sup>7</sup> Schuhmann, H. H.: Early diagnosis and in brief, treatment of tumors of the Jaw, *Dental Review*, Aug. 1896

impressed with the fact that "it is remarkable that even the most generous removal of either upper or lower jaw creates so little disfigurement in comparison with what one would expect from such an operation."

#### EARLY MANAGEMENT OF CLEFT PALATE

By the end of the 19th century, interest was increasing in oral surgery, especially as applied to plastic procedures for the correction of cleft lip and cleft palate. Few articles found their way into the medical literature, the majority being published in the dental literature of that time. The oral surgeons themselves stimulated this trend. It is interesting to note that some of these men had an M.D. degree, some a D.D.S. and some had both.

The problem of correcting the special speech defects resulting from congenital cleft palate received much attention. Then, even as at the present time, keen students of the problem were aware of the fact that mere surgical closure of a cleft palate did not produce satisfactory function and speech. Therefore, the use of artificial vela was advocated to remedy this situation. C. S. Case, M.D., D.D.S., who was first located in Jackson, Michigan, but later came to Chicago, was an early and a thorough investigator in the use of obturators and artificial vela. His paper on "Artificial Vela for Congenital Cleft of the Palate"<sup>8</sup> stressed the advantage of artificial vela, the method of construction and the importance of proper speech training. His manner of dealing with that problem has a very modern touch, as judged by present-day concepts.

In 1889 Dr. Case wrote on "Soft Rubber Palates for Congenital Clefts."<sup>9</sup> He decried the lack of instruction in dental colleges and in textbooks on the art of constructing soft rubber palates. He believed that such a device fulfilled most of the requirements of closing the defect as well as "perfecting impaired tone and articulation." Dr. Case expressed the belief that failures were the result of fixed habits of faulty speech formation and abnormal muscle action, and he emphasized the need of commencing the use of appliances in youth and early adult life. He stated that there existed a reluctance to remake artificial palates or obturators to conform to changes caused by muscle development, and that many appliances were worn after the rubber had deteriorated and become distorted in shape. He described his improved methods of construction, and exhibited models, dies and impression cups for the making of artificial vela and obturators, giving a full and explicit description of the process of construction.

At the Columbian Dental Congress in 1893, "Surgical Treatment of Palatal Defects" was discussed.

<sup>8</sup> Case, C. S., Artificial vela for congenital cleft of the palate, *Dental Register*, Vol. XLII, 1888)

<sup>9</sup> Case, C. S., Soft rubber palates for congenital clefts, *Trans. Ill. State Dental Soc.* 1889.



Dr. Case continued to have an interest in this field and in 1895 stated <sup>10</sup> that surgical treatment was indicated only in those cases where there was an abundance of tissue since, in most instances, surgical management had failed. He claimed that artificial appliances could furnish a means of attaining vocal articulation, providing the operation was given an opportunity to develop the palate according to the needs and possibilities of the muscles, and providing the patient persistently tried to speak distinctly. It was his firm belief that where surgical intervention was to be used, it should be performed before the patient was five years old and then only in the presence of an abundance of tissue. After that age, he felt that results from surgery were not as good as those obtained by use of the artificial methods, and he presented a patient who, at the age of 30, had commenced wearing an artificial palate with great success. This paper was discussed by Dr. Truman W. Brophy, also an M.D. and D.D.S., who agreed that surgical treatment should be reserved almost entirely for the treatment of children, but he pointed out that many adults got along very satisfactorily by the aid of surgical procedure. He emphasized that obturators were valuable, particularly in those cases where surgery had been unsuccessful. Dr. G. V. Black, in discussing this paper, stated that unless patients were operated upon when very young, they had a continual struggle to articulate throughout life. He cited a case of a 23-year old woman who had a cleft palate operated successfully at the age of 12, but when suddenly frightened, she lost the ability to articulate for the time being. The paper was further discussed by Dr. T. L. Gilmer who said that operations should not be performed before the age of one year and, unless surgical treatment was applied before the age of 10 or 15 years, better results would come from an obturator.

In 1896 Dr. Case described <sup>11</sup> a method of taking a sectional impression of cleft palate cases, using a dental compound plus plaster. From this impression a cast was made and an obturator constructed.

Also in 1896 Dr. Brophy described <sup>12</sup> a means of preventing sutures from tearing out by the use of wire sutures twisted over lead plates. He felt that the lead plates also acted as splints and thus aided the union of the parts.

Again in 1897 Dr. Brophy urged early closure of the palate but not of the lip,<sup>13</sup> and stated that a divided lip facilitated access and gave more room

<sup>10</sup> Case, C. S.: When should the congenital cleft palate receive surgical treatment? *Proc. Chicago Dental Soc.*, January 8, 1895, published in *The Dental Digest*, Vol. 1, No. 1, January 1895.

<sup>11</sup> Case, C. S.: Impressions of cleft palate, published in *The Bur* as abstracted in *Catching's Compendium of Practical Dentistry for 1896*.

<sup>12</sup> Brophy, Truman W.: New method of closing the soft palate, *Dental Cosmos*, July 1896.

<sup>13</sup> Brophy, Truman W.: Early operations for the closure of cleft palate, *Proc. Ill. State Dental Soc.*, 1897.

for such palatal surgery; that "bones easily yield to pressure"; that there was better deglutition and that the muscles developed better. He further stated that if the palate were not closed, the clefts would grow broader and broader. He urged early operation for two reasons: (1) If done early, the patient could speak as other children did, and (2) it was much easier to carry out if done before calcification and dental eruption were far advanced. Some of these statements are at variance with the present-day thought. Dr. Brophy also cited the advantage of lead plates to distribute pressure and to serve as a splint.

In this same year (1897), Dr. Case again demonstrated his keen interest in the cleft palate problem<sup>14</sup> by describing the orthodontic treatment of a patient with a large cleft in the hard and soft palates. The teeth were very irregular but were brought into good occlusion. Then an obturator was made, first a thin velum, and later the adequate thickness and length to produce good palate closures. Dr. Case reported that speech was thus improved "phenomenally;" that the patient could not only whistle like a boy but could also produce a "shrill whistle with two fingers in his mouth;" in addition, he enunciated perfectly with the exception of the sounds C and G.

In 1899, Dr. Brophy urged<sup>15</sup> operations in congenital cleft palate as soon after birth as practicable since injuries sustained by the child at parturition produce little immediate or ultimate damaging result. In support of this belief he cited these reasons: There was less psychic shock; the bones lend themselves to bending rather than fracture; an early normal use of the velum muscle will encourage development; normal occlusion will develop; there will be less subsequent deformity, and speech can develop better after early surgery than if delayed until faulty habits of articulation are acquired.

At this clinic, Dr. Brophy showed a number of cases. One patient aged 9 years had been operated upon 10 days after birth for double harelip and cleft of both the hard and soft palates. The occlusion was not quite normal, but Dr. Brophy stated that the upper teeth could be forced farther out to occlude with the lowers. The lips also required shortening and revision.

The second case, aged three months, was operated upon for closure of the hard palate at the age of three weeks and showed the lead palates and silver sutures still in place. It was pointed out that there was a dominant hereditary tendency to congenital malformation running in this family as shown by the following facts: This second patient was a brother of the first case. There were six children in this family and examination revealed

<sup>14</sup> Case, C. S.: Clinic No. 37: Obturators and regulating appliances, *Dental Review*, Vol. XV, No. 4, April 15, 1897.

<sup>15</sup> Brophy, Truman W.: The radical cure of congenital cleft palate, with exhibition of patients, *Trans. National Dental Assoc.* 1899.

the following: The eldest was normal. The second had the double cleft lip and cleft palate deformity. The third had a cleft lip. The fourth had a double cleft lip and cleft palate. The fifth was normal, and the sixth had a single cleft lip and a cleft palate. The paternal grandfather was similarly afflicted. Dr. Brophy believed that nearly all such cases have a hereditary origin.

Dr. Brophy described his operative procedure in detail. He transfixed the maxilla with two silver wire sutures which were twisted over lead plates to approximate the bone edges at the margin of the defect. In difficult cases the bone was severed through the malar processes. The tooth germs were "sometimes" disturbed. The operation caused the palate arch to be contracted but "this will not be permanent." The lead plates might cause abrasion of the mucous membrane but this "need not disturb the operator." The lead plates were left in situ for a period of four to eight weeks. In the discussion which followed this lecture, Dr. W. M. Barrett hailed it as the presentation of a "modern miracle."

In his lectures on oral surgery at Northwestern University in 1899 and 1900, Dr. Gilmer discussed cleft palate and harelip. He stated that he had had satisfaction from using the Langenbeck method of palatoplasty, and he described his method of reconstruction of the harelip deformity.

The puzzling questions of the basic causation of cleft palate troubled the thinking surgeons of that period. One of the more erudite men of the time was Dr. E. S. Talbot of Chicago. He proposed<sup>16</sup> that embryogeny could be modified by the various influences of growth, of atavism and of heredity. Feeling that some newer experiments with extract of the hypophysis had influenced growth, Dr. Talbot suggested that this extract be tried on cleft palate cases on the theory that the arrested development of the affected oral tissues was an arrest of potentiality rather than of growth, and that there might still be the possibility of further development even after birth which could be stimulated by this hormone. This was an unusual speculation but unfortunately subsequent literature did not record whether anything further came of it.

With this presentation the turn of the century has been reached and the development of plastic surgery has been traced from its earlier days of about 1850 to 1900. At times this branch of surgery was considered as part of general surgery. At other times it was only a diversion in the routine of one of the older specialties, namely ophthalmology, otolaryngology or dermatology. Occasionally specialists in urology, gynecology, and orthopedic diseases performed plastic procedures. The maxillofacial and oral

<sup>16</sup> Talbot, E. S.: Etiology of cleft palate, Section on Oral Surgery, 4th International Dental Congress, 1904.



surgeons furnished a directional impetus to the development of plastic surgery as a distinct specialty by their important work on cleft lip and cleft palate cases, and also by reports of their management of tumor and traumatic conditions involving the face and oral structures. Their good work at such an early date is remarkable, but its value was gradually forgotten until recent years. Now again we are convinced that the methods of cleft palate management advocated by these pioneers are indeed capable of yielding gratifying results.

In conclusion it should be emphasized that the path which led to the growth of plastic surgery as a full-grown specialty was, in the latter half of the 19th century, not a wide or clearly defined highway. But there were a number of resolute pioneers who pointed the way with a firm and sure step. And there were others who led off at tangent directions whose steps had to be retraced. There were those also who entered the pathway of plastic surgery only by accident or as a side excursion. Much credit must be given to men like Drs. Daniel Brainard, David Prince, Moses Gunn, D. W. Hall and Daniel Booth for blazing a trail through an unexplored territory. Especially is much credit due to the group of outstanding practitioners in the field of maxillofacial surgery, among them Drs. Truman W. Brophy, Thomas L. Gilmer, G. V. Black, C. S. Case, H. H. Schuhmann and E. S. Talbot. These "intellectual giants" have indeed left us an example of careful, diligent scientific effort and a heritage of knowledge that should serve as guiding beacons for many years to come. Their work was most significant in bringing together the fields of medicine and dentistry to the mutual benefit of both.<sup>17</sup>

<sup>17</sup> For biographical details concerning these men, the reader is referred to the numerous special papers current at that time in the field of dentistry.—*Editor*

## CHAPTER XVII

# PATHOLOGY

By EDWIN F. HIRSCH, M.D.\*

THE early medical schools of the State of Illinois, both in and about Chicago, did little or nothing to arouse an interest in promoting pathology. The earliest record of a necropsy in Chicago was one performed by Dr. Daniel Brainard in 1844, who described an anencephalic with a cardiac malformation. In the same year, Dr. Austin Flint reported two instances of sudden death "with autopsical examinations." The first person to hold a Chair in Pathology in Chicago was Dr. N. S. Davis, who came to this city in 1849 as Professor of Physiology and Pathology at Rush Medical College. He brought with him a microscope, believed to be the first one in the state.<sup>1</sup>

At the staff meeting of Cook County Hospital on December 30, 1865, Dr. Henry M. Lyman was appointed to the newly created position of pathologist, or "curator of the dead house." Dr. Lyman had few facilities for his newly created assignment: a knife, a saw, a chisel and a mallet. The attending physicians, who themselves wished to make dissections on their dead patients, left little equipment for the curator in an institution which had no microscope and was unwilling or unable to afford alcohol and jars for specimens. Dr. Lyman in 1870 was succeeded by Dr. Hosmer A. Johnson.

Shortly after November, 1873, the office of the pathologist at Cook County Hospital was abolished by the medical staff, but on March 31, 1877, the staff, recognizing the value of this service, decided again to appoint a curator. A month later Dr. I. N. Danforth was so designated. Dr. Hektoen stated that of the three physicians mentioned for this appointment only Dr. Danforth merited the designation of pathologist. In fact, he regarded Danforth as the only pathologist worthy of this name before Dr. Christian Fenger; for it was he (Danforth) who first initiated the practice of demonstrating postmortems to classes of medical students. Before re-

\* For many years Dr. Hirsch has been Pathologist to the St. Luke's Hospital in Chicago. For the past 29 years he has served as the Secretary of the Chicago Pathological Society and is widely known for his numerous scientific papers; especially for his illustrated autopsy reports published from time to time in the *Illinois Medical Journal* and in the *Journal of the American Medical Association*.—Editor

<sup>1</sup> Hektoen, Ludvig: Early pathology in Chicago and Christian Fenger, *Proc. Inst. Med. of Chicago*, 11: 258, 1937.

ceiving his appointment as pathologist at Cook County Hospital on March 28, 1877, Danforth had been pathologist at St. Luke's Hospital in Chicago for some time. In that institution, however, the autopsies were very few, were generally made hastily and surreptitiously, and never in the presence of students. This was a general practice in all hospitals during that time. Also at this period there were no laws or regulations for obtaining a division of anatomic material between the medical schools. Every Professor of Anatomy and every Pathology Demonstrator became a sort of pirate who prowled about in the dead houses of hospitals in search of teaching material.

An "upheaval" in the staff of the Cook County Hospital during the spring or summer of 1878 terminated the Medical Board and forced the dismissal of the pathologist. The work of Dr. Danforth, however, prepared the background for Dr. Christian Fenger who, in the years 1877 to 1902, really created pathology in Chicago and thereby advanced the entire practice of medicine in the State of Illinois. His first appointment at Cook County Hospital began in the spring of 1878, first as pathologist and later as surgeon. Then followed the splendid growth of pathology in Chicago under Drs. Ludvig Hektoen, E. R. LeCount, H. Gideon Wells, Robert Zeit, R. H. Jaffé and others, which has carried into the generation of pathologists now active in Chicago.

#### CHICAGO PATHOLOGICAL SOCIETY

Following the great Chicago fire in October 1871, the Chicago Medical Society, owing to the devastation downtown, met for several years on the west side of the City. In this Society was a small group of clinicians who became interested in pathology and fostered the study of diseased tissues, then usually obtained by necropsy examinations. About April 10, 1878, another society—the West Chicago Medical Society—was organized, the immediate occasion for this being the migration of the original Chicago Medical Society from the west to the south side of the city. Many members in this new Society were interested in the study of pathology. Therefore, in 1881, at the suggestion of Dr. H. M. Lyman, then President of the Society, its name was changed from the West Chicago Medical Society to the *Chicago Pathological Society*. The progress of this new Society through the years and even up to the present time reflects a growth of interest in pathology that penetrated the practice of medicine throughout the entire state. In the early stage, this interest was revealed in the Chicago medical schools, first on the west side and then to the others. From these foci the interest spread into the hospitals and clinical fields of Chicago and thence gradually into the larger communities of the state.

During the years 1878 to 1883, the meetings of the group on the west side



were held in the residence of Dr. Lyman at 533 West Adams Street. From 1883 to 1889, the Society (now the Chicago Pathological Society) met in various public buildings or at the homes of its members. The office of Dr. C. D. Wescott, Madison Street and Ogden Avenue, was the place of meeting from 1888 to 1891. From 1891 to 1894 the Society met at the Hammond Library, and from 1894 to February 14, 1898, the group met in the Laboratory Building of Rush Medical College, 762 West Harrison Street.

After February 14, 1898, the Society was designated as the Section on Pathology of the Chicago Medical Society and held its meetings in the Chicago Medical Society's rooms in the Stewart Building, 92 to 98 South State Street.

From 1878 to 1882 monthly meetings were held more or less regularly. From 1882 to 1895 seven to twelve scientific meetings were held each year, and since then meetings have been held each month from October to May or June inclusive.

Reports of some of the early meetings were published in the *Chicago Medical Journal and Examiner* from 1878 to 1885; from September 1891 to September 1894 the transactions of the Society were published monthly in the *Chicago Medical Recorder*; from 1894 to June 1926, they were published as separate numbers in a total of 111½ volumes. Volume I of the *Transactions of the Chicago Pathological Society* contains the scientific papers presented at the meetings during the years 1894 and 1895. The preface in this volume states that "during the last two or three years a new impetus has been given to the work of the Chicago Pathological Society. This has been and in large measure is due to the enthusiastic response to the demand for more scientific and more strictly pathological papers; in part to the greatly increased membership; in part to the holdings of the meetings at a place near the County Hospital, to whose morgue the Society is indebted for many valuable specimens illustrating morbid anatomy; in part to the fact that at the new place of meeting plenty of microscopes and accessories are at hand inviting a display of microscopic specimens." Many original articles appeared in full in these volumes, the majority in the field of morbid anatomy but many also were in bacteriology, immunology and biochemistry. An analysis of this program material will disclose interesting trends of investigation during the period in these basic fields of study.

According to the program of February 8, 1892, the censors reported upon the application for membership of Drs. E. I. Hook, Ludvig Hektoen and H. Williams Howard. Presumably they were elected, and at the next meeting (March 14, 1892), Dr. Hektoen reported a case of "traumatic rupture of healthy cardiac valves, presented (sic) the patient, and exhibited speci-

mens." Dr. George H. Weaver<sup>2</sup> was elected to membership on July 11, 1893; Dr. J. B. Herrick and Dr. E. R. LeCount on July 9, 1894, and Dr. Christian Fenger on November 12, 1900.

<sup>2</sup> Dr. Weaver became Secretary to the Chicago Pathological Society on May 14, 1894 and served until May 1925, a period of thirty-one years. Dr. E. F. Hirsch, the present Secretary, is now serving his twenty-ninth year. Thus, two succeeding Secretaries have contributed sixty years of continuous service, covering in that time all but 13 of a total of the 73 years' span of life of the Chicago Pathological Society.—*Editor*

## CHAPTER XVIII

# MEDICAL BACTERIOLOGY

### NOTES ON THE HISTORY OF BACTERIOLOGY IN CHICAGO

### PRIOR TO THE ORGANIZATION OF BACTERIOLOGIC TEACHING

(ABOUT 1890)\*

By LUDVIG HEKTOEN, M.D.†

THE earliest signs of any interest in bacteriology in Chicago appear to be occasional articles and notes on disease germs, septicemia, antiseptic surgery and related topics which were published in the local medical press, beginning about 1869. There are no indications, however, that any one in Chicago was following closely and at first hand the early developments and applications of bacteriology in France, Germany and England. The names of Pasteur, Lister and Koch are barely mentioned in the Chicago medical journals of the decade from 1869 to 1879. Bacteria and bacteriology were then unfamiliar words. It was at best a period of ignorance and doubt concerning the germ theory of disease and infection. In 1869 Edmund Andrews, a leading surgeon, writing about antiseptic surgery, concluded as follows:

"On the whole, it must be acknowledged that the use of carbolic acid has revolutionized certain branches of surgery, and enables us to save many limbs and lives which would formerly have been lost. I would advise no one to make a hobby of it, but that it is a remarkable addition to the resources of our art is a fixed and undeniable fact."

I. N. Danforth, in his articles on disease germs, referred especially to Tyndall's work on dust and to Lister's address in 1867. In the cholera epidemic in Chicago in 1873 Danforth examined the lesions microscopically. N. S. Davis, a leading physician, made this statement about erysipelas:

\* Reprinted from *Bull. Soc. Med. Hist. Chicago* 5: 3-21, 1937.

† Dr. Hektoen was one of the first to teach and to conduct research in the field of bacteriology in Illinois. No one, therefore, was better fitted to write the early history of this subject. His paper is herewith reprinted—*Editor*



"Believing erysipelas to be a specific disease, caused by an animal poison, either imbibed with the air and water from without or engendered by some imperfection of the disintegrating processes within; I cannot fully agree with the majority of writers on practical medicine, who state in general terms that it must be treated on the same principles as the continued fevers."

A few years later, in a thoughtful paper on the study of etiology, he wrote:

"With a steadily increasing tendency in the professional mind to refer to all acute diseases, whether epidemic, endemic or sporadic, to specific causes or viruses, capable of propagation by fermentative or zymotic action, there is an equal tendency to indulge in hypotheses instead of carefully observed facts."

In order that more needed facts might be gathered he proposed a co-operative study of diseases by such means of clinical observation as were then available. But at the end of the decade a change set in. In 1879 Christian Fenger (1840-1902), a Danish pathologist and surgeon who came to Chicago in 1877, made a report to the Chicago Pathological Society which was recorded by the secretary, William T. Belfield, as follows:

"Dr. Chris. Fenger, pathologist to the Cook County Hospital, exhibited some morbid specimens obtained from a recent patient. When he opened the body, the doctor had no history of the case, except that the patient presented typhoid symptoms. Opening the abdomen, he found infarctions in the submucous tissue of the intestines, in the spleen and in the kidneys. The source of these emboli was found in an ulcerous endocarditis, both sets of semilunar valves presenting an abundant deposit. Upon examining farther, an embolus was found in the left middle meningeal artery, which had caused an extensive infarct; and several small infarcts were found in each retina (illustrating the value of the ophthalmoscope in the diagnosis of heart disease). The doctor thought from the fact that some of the infarcts were breaking down into abscesses, that the cause of endocarditis was septicemia. There was no evidence of acute rheumatism nor of any surgical operation. Careful search, however, revealed a suppurating synovitis at the bottom of a large bunion. Dr. Fenger said this might have been the starting point of the whole disease. As a proof that this was a blood disease the doctor exhibited under the microscope some of the exudate from the heart valves in which were myriads of micrococci."

As I have stated elsewhere, this was the first demonstration of the bacterial nature of acute endocarditis on this side of the Atlantic. It was also one of the first, if not the first, of the public demonstrations of pathogenic bacteria in Chicago.

In 1880 H. D. Valin reviewed the work of Pasteur, Lister, Koch and

others. He stated that in the inaugural thesis which he had presented to the medical faculty of the University of Vermont the previous year he had recapitulated the views of the best writers on the germ theory of disease as follows:

"That contagion of infectious diseases is regarded by some authors as too minute to be discovered by the microscope; by others, as bacteria which cannot be distinguished from those generally found in many pathological processes in the body. The spread of the contagium requires a region (an habitat) where it has always been endemic, as India for cholera, and Ireland for typhus fever, unless we accept for it a theory of spontaneous generation. It also requires a certain age, sex, and predisposition on the part of the individual, and its extension is promoted by warmth, moisture and filth; these accessory circumstances explaining how there may be degrees in contagion. Each infectious disease must, beside, have special bacteria assigned as its cause."

Valin also translated Pasteur's report to the Academy of Medicine of Paris on his experiments with fowl cholera. During these years (1879-1881) in the same journal appeared also translations and abstracts of Billroth and Ehrlich's article on *Coccobacteria septica*, of Talamon's report on the bacteriology of diphtheria, of reports of Pasteur's work on vaccination against anthrax and on hydrophobia, and of articles (not by Lister) on the antiseptic treatment of wounds. Lister's method and results are described, however, in a letter written from London by Charles T. Parkes, the Chicago surgeon. The only reports on original bacteriologic work are one published by Lester Curtis on micro-organisms in the blood in a case of tetanus and one by Nicholas Senn, then in Milwaukee, on spontaneous osteomyelitis in the long bones, in which he stated that in the pus he had found "numerous living cocci."

In 1881 a long monograph on yellow fever by H. D. Schmidt of New Orleans was read before the Chicago Biological Society and then printed in full in the *Chicago Medical Examiner*, running through several numbers. Schmidt discussed at length the nature of "infectious poisons" and reviewed the work of Pasteur and other early bacteriologists quite thoroughly, without accepting the view that infectious diseases might be caused by bacteria. He concluded that the agent of yellow fever was the product of the diseased organism itself.

At this point a brief statement about the introduction of antiseptic surgery in Chicago seems appropriate. By 1878 the new method had secured a definite foothold. The conditions just before are described by Roswell Park:

"There are those who can look back further than I can, and yet it has happened that quite within my easy recollection the whole aspect of sur-

gery has been changed by the work of Lister and his coworkers. I can remember my first season as house surgeon, in one of the largest and newest of the Western hospitals (Cook County Hospital), when throughout that long and, to me, sad season, scarcely one patient was submitted to any major or semiserious operation who did not die of blood poisoning. I saw men die after what seemed to me even minor operations. Scarcely a patient entered the hospital with a compound fracture whose doom was not sealed. Tracheotomy was a useless performance; trephining was interesting as a spectacle, but useless as a resource. Even internal urethrotomy became a fatal procedure; and so throughout the list. This was in the years of grace 1876 and 1877."

According to the printed records, the pioneers in antiseptic surgery in Chicago were Edmund Andrews, who said that he had devised means somewhat simpler than Lister's "rather complex methods," Henry Banga, Edwin Powell and Christian Fenger. Henry Banga, a Swiss physician from Basel, where he had applied the antiseptic treatment of compound complicated fracture, with brilliant results, came to Chicago in 1876 and according to Holinger "introduced antiseptis in Chicago and the West." In 1878 Banga wrote that "union by first intention is the rule (in kolpoperineoplasty) if the operator observes the principles long established for that purpose, particularly if the antiseptic treatment be carefully pursued." Goldspohn stated that antiseptis in surgery was introduced in Chicago in the Cook County Hospital "during March 1878, by Dr. Edwin Powell, who had observed its use at length in the hands of its author, Joseph Lister, at King's College Hospital, London." In an autobiographic sketch Fenger wrote that in 1878 or 1879 he "introduced the antiseptic-Lister's-operative methods" in the Cook County Hospital.

It appears, then, that in Chicago as elsewhere Lister's methods were taken up by several surgeons at about the same time. It is undoubtedly true that, as Bayard Holmes has said, antiseptic surgery in the Cook County Hospital could never have made the headway that it did in the 1880's had not the trained nurse preceded it in the hospital wards. That Chicago did not lag much, if at all, behind other parts of the country in the matter of surgical antiseptis is evident from the following statement made in 1877 by Robert F. Weir:

"It is only lately that, in America, attention has been given practically to the teachings of Lister in respect to the treatment of wounds. In fact, aside from an article by Schuffert in the *New Orleans Med. & Surg. Jour.*, little or nothing has appeared in our medical journals relative to the results of the so-called antiseptic method. Within the past year, however, a change has occurred, due probably both to the interest excited by the personal expositions of Lister at our late Medical Congress at Philadelphia, and also to



the satisfactory results that have ensued from this treatment in the practice of many German surgeons with large hospital experience."

In 1879 Moses Gunn stated that many followed Listerism, being firmly convinced that it diminished and prevented suppuration and septicemia. And then he discussed at length the question whether suppuration was an unmitigated evil. The further developments in antisepsis were outlined interestingly by Edmund Andrews in 1882:

"The main principles of antiseptic surgery have been approved by the majority of American surgeons. Strict Listerism, however, by which I mean, an adherence to all Lister's peculiar methods, is not generally accepted. I have recently instituted some inquiries on the subject in Chicago, Philadelphia, and New York, with the following results: In Chicago, we generally believe in the principles of antisepticism, but we adopt numerous variations in the methods of application, and do not servilely follow Lister's details."

Then came Koch's discovery of the tubercle bacillus. His announcement was made on March 24, 1882. Fortunately a young Chicago physician of exceptional ability and scientific interests, William T. Belfield (1856-1919), who obtained the degree of Doctor of Medicine at Rush Medical College in 1877, was in Vienna at that time, and he promptly reported Koch's announcement and the events connected with it to the *Chicago Medical Journal and Examiner* in letters dated May 3, June 3 and July 3, 1882. On his return to Chicago that same summer he demonstrated the tubercle bacillus in the Cook County Hospital and to the Chicago Pathological Society. He emphasized the clinical value of examining the sputum for tubercle bacilli. On a certain occasion twenty-two specimens were submitted to him for examination, and he found tubercle bacilli in all of them; twenty of the specimens came from patients with phthisis and two from patients with chronic bronchitis. Bayard Holmes graphically described a demonstration by Belfield:

"One day during this summer course (1882) there was a notice on the bulletin board that Dr. W. T. Belfield would perform an autopsy and give a lecture on tuberculosis at the County Hospital Morgue. As I had a medical student's ticket for the County Hospital that cost me five dollars, I was privileged to go. Dr. Belfield had lately returned from Europe, and had written a wonderful book on genito-urinary diseases, the early chapters of which had fascinated me. (There is a mistake here because Belfield did not publish any book on genito-urinary diseases until 1884.) The morgue was in the rear of the County Hospital, and the autopsy amphitheatre was above the dead house. We climbed a narrow flight of stairs and came down into the close seats where our knees punched the men in front of us in the small of the back. The place smelled horribly, and this was my first autopsy.

The amphitheatre was soon full and as it was a hot day in May the place was stifling. The emaciated corpse was brought in on a stretcher and dumped on the revolving copper autopsy table. One of the County Hospital internes began to cut open the chest and abdomen as Dr. Belfield recited the history of the patient and the physical antemortem findings. The examination of the sputum was particularly accented and students were invited to come down into the arena and see the newly discovered *Bacillus tuberculosis* of Koch. Then the manner of staining was actually demonstrated upon the squeezings from the lungs of the cadaver, which had now been silently autopsied by the interne. As my memory serves me this was the most concise, complete, and convincing pathological lecture I have ever heard. It remains in the foreground of my mind wherever tuberculosis is called to my attention.

"Dr. Belfield had not then been combatted long enough to arouse his subsequent manner of discussion, which was often cynical and ironical. But to me his manner has always been intelligible and explicable. He was a medical scout who brought disagreeable news to those who did not wish to change their minds, and were satisfied with the hereditary factor on which they explained their etiologic theory of tuberculosis."

In February 1883 Belfield gave the Cartwright Lectures in New York City, on the relations of micro-organisms to disease. These lectures were published in the *Medical Record* and reprinted in book form. This book was well received. I now quote from a review signed H. G. (Henry Gradle?).

"While these lectures can hardly introduce a student fully into our present knowledge of bacteria, they serve admirably to place the topic in a lucid and comprehensive way before physicians partly acquainted with the details. When we reflect upon the amount of prejudice the germ theory encounters in this country, it seems proper, that the lecturer should have assumed a polemic, and even an aggressive tone. Although this style may not help to conciliate his opponents, it cannot be said that Dr. Belfield is unjust in his remarks. Sarcasm is one of the best weapons against ignorance, especially, when so well put as in these lectures."

In his discussion of endocarditis, it seems that Belfield had forgotten his own report of Fenger's demonstration of cocci in endocarditis before the Chicago Pathological Society in 1879. Belfield was inclined to speak rather slightly of Pasteur and of Klebs. Of Pasteur he said that the hasty and sometimes erroneous conclusions which Pasteur had published "illustrate the inability of his judgment to cope with his imagination." It is reasonable to assume that Belfield had not escaped the influence of the prejudice then prevalent in Germany against Pasteur's work. Belfield evaluated the discovery of the tubercle bacillus as follows:

"Indeed, with all due honor to Koch, and admiration for the most brilliant of experimental researches, we must admit that the discovery of the bacillus has chiefly an anatomical value: it localized in this organism the infectious principle which had long been known to exist; it enables us to distinguish—ante- and post-mortem—infectious tuberculosis from inflammation, tubercular or other, due to other causes; but it does not as yet explain the hereditary predisposition, nor why this infection occurs in one man and not in another exposed to the same influences."

Lantern slides of the photomicrographs used to illustrate the Cartwright Lectures were shown to the Chicago Medical Society by Belfield on April 16, 1883. Among them were illustrations of *Actinomyces*, and soon afterward he reported the finding of actinomycosis in cattle at the Chicago stockyards. Some years before he had demonstrated trichinae in hogs and described migration of leukocytes in passive hyperemia. In the fall of 1883 Belfield was appointed attending surgeon in the department of genito-urinary diseases in the Central Free Dispensary (Rush Medical College), and thenceforth he devoted himself mainly to work in this specialty, in which he rose to distinction. In 1891, however, he accepted appointment as professor of bacteriology in Rush Medical College, and during the next ten years he gave an annual course of lectures on bacteriology in its relations to practical medicine and surgery. As a textbook he recommended Abbott's *Bacteriology*. He did not introduce any practical work in connection with his lectures, and in 1894 a separate laboratory course was established in the college under the direction of George H. Weaver.

In 1883 another young Chicago physician, Henry Gradle (1855–1911), on his return after a period of study abroad, where he worked with Koch, also published a book on bacteria in relation to disease. This book was based on eight lectures by the author at the Chicago Medical College (now Northwestern University School of Medicine), where he had received his medical education, graduating in 1874, and was professor of physiology and hygiene from 1881 to 1895. From 1895 to 1906 he was professor of ophthalmology in the same school. The two books by Belfield and Gradle as well as the one by Black, which will be discussed later, are among the earliest books on bacteria and "the germ theory of disease" in English. Gradle's book gives an excellent summary of the knowledge of bacteria in disease at that time. As stated in the review of the book "the subject is systematically and thoroughly dealt with from beginning to end, but, while criticism is freely employed, it is, nevertheless, so fairly done and is so free from all personality, that the writer can not be accused of undue prejudice, although it is clearly evident that he is inclined to adopt the most advanced views with regard to the etiology of the diseases which are discussed." It is noteworthy that Gradle's book was translated into Japanese in 1887 by T.



Yabe, a surgeon in the Japanese navy. That Gradle himself worked with bacteria is evident from the statements about gelatin and about the tubercle bacillus.

"A drawback to the gelatine soil is its low melting point, viz: 28° C. In my own experience most of the grades to be had in commerce here became fluid at even a lower temperature in spite of accurate neutralization of any trace of acidity present. In order to obviate this difficulty Koch has lately used solidified blood serum.

"Apart from the fundamental scientific importance of Koch's work, it has almost at once led to immediate practical results. Koch's own statement, that the bacilli are often present in the sputum of consumptives, has been confirmed by a host of other observers so that the microscopic examination of the sputum possesses now a decided diagnostic value. It is necessary hence to become acquainted with the mode of demonstrating the bacilli."

He himself found the bacilli in sputum from thirty-five consecutive patients with pulmonary tuberculosis. The practical value of Koch's discovery is pointed out also in an article on the microscopic examination of the sputum in consumption. My friend Dr. C. W. Earle, referring to his own efforts to stain tubercle bacilli in 1885, wrote: "For days and weeks I stained and stained (sputum from tuberculous patients) but could never find a tubercle bacillus. Finally I mentioned my trouble to Dr. Fenger. He said 'Go see Gradle.' One day I called on him in his office with a specimen. He stained it and showed me myriads of tubercle bacilli. I never had any trouble after that." Gradle saw early and clearly the tragic consequences of the emptying of sewage into Lake Michigan, the source of the water supply to Chicago. In 1886, at a meeting of the Chicago Medical Society, he recommended boiling or thorough filtration of the water supply, especially because there were then over 5,000 cases of typhoid fever annually in the city and the discharges would contain typhoid bacilli.

Mention must now be made of a book on the formation of poisons by micro-organisms, published in 1884 by G. V. Black, "the father of modern dentistry." The book contains seven lectures which he had delivered before students and practitioners at the Chicago College of Dental Surgery. The first three lectures (part 1) deal with the historical aspects of the evolution of the germ theory, and the last four lectures (part 2), with the relations of micro-organisms to the production of disease. In an appendix Black reviewed the bearing of dental caries on the germ theory, dwelling largely on the work then being done in Berlin by the American dentist W. D. Miller. In this book Black revealed himself as a studious scholar, close observer and philosopher, deeply concerned with basic problems. In his interesting speculations he sometimes anticipated important develop-

ments. Thus, in speaking of Sternberg's observations on the taking up of bacteria by cells, he commented:

"The writer, though not intending to put forward his own experimentation in this work, may say that he has also seen strong evidence of the truth of this in tissue taken directly from man to the warmed stage of the microscope, in which the wandering cells were found loaded with micrococci, which in many instances seemed to be destroying the cells. Some were motionless and filled to overflowing with the organisms, with little chains of the micrococci extending from them, while others containing but few of the organisms exhibited their usual motions. This phenomenon may occasionally be demonstrated in the peculiar granulations which are sometimes found under plates for artificial teeth, where the gums have taken on a bad condition."

In another place he said:

"Observations have been recorded by a number of competent observers that go to show that the white corpuscles of the blood, the leucocytes and the wandering cells, exert a special influence against the intrusion of micro-organisms. These cells appear to pick up the organisms and take them into their interior, and I am of the opinion that in very many cases the organisms are destroyed—digested—by the cells."

In discussing the question, How can germs cause disease? he suggested that by their remolecularizations of matter they "form poisons of the nature of alkaloids, which are the active agents in the production of disease." His conception of resistance to infection is illustrated by the following quotations:

"Surely if the tissues are capable of forming, by reason of irritation, a secretion that will digest a piece of ivory that has been thrust into the flesh, which has been proved by direct experiment, we should expect this kind of resistance to the development of disease producing germs. . . . The normal tissues of the animal resist the invasions of micro-organisms by throwing out, or forming a digestive body calculated to destroy them or dissipate and nullify their action; aroused thereto by the presence of, or the irritating agents given out by, the organisms."

Black also published articles on bacteriologic topics; in 1887 he gave demonstrations of bacterial cultures before the Illinois State Dental Society.

Bayard Holmes (1852–1924) played a significant part in bacteriology in Chicago during the years shortly after 1882. His account of Belfield's demonstration of the tubercle bacillus in the Cook County Hospital in the summer of 1882 has been quoted *in extenso*. Holmes was then about to begin to study medicine in the Chicago Homeopathic Medical College. I have drawn freely from his lively account of medical education in Chi-

cago in 1882 and after, which is largely autobiographic. While he was an intern in the Cook County Hospital he set up a bacteriologic laboratory in his bathroom and made cultures on gelatin, boiled eggs and coagulated hydrocele fluid of wounds and suture materials. His cotton-stoppered tubes and platinum wire provoked much amusement and ridicule on the part of his associates. He was primarily a self-taught bacteriologist, guided by Sternberg's and Klein's books. His first bacteriologic article was written in conjunction with Christian Fenger, whose assistant he then was, and dealt with the bacteriologic control of antiseptic methods. The circumstances under which this work was done are well described in the sketch that Holmes wrote of Fenger many years afterward:

"Some time in the middle of summer (1886) Doctor Fenger gave me a subject to study by experiment and in the literature, which subject had turned up in our work together. It was the relation of air infection to contact infection and the danger of each. I fitted up an operating room in the attic of the Passavant Hospital and after putting it in the best order possible, I exposed Petri dishes of nutrient gelatine to the air for ten hours and thus attempted to determine the danger of air infection. I then exposed similar Petri dishes during the hour or two that we were engaged in operating in the same room. From a study of these dishes, I determined the number of microbes of a pathogenic nature that fell upon each square inch of surface when the room was closed and when it was open and in use. I also made examinations of the silk, the catgut, the laparotomy sponges and the sterilized instruments before the operation, during the operation and at its close. By these experiments Doctor Fenger concluded that the danger of air infection was trifling compared with the danger from contact infection and, as a result of these examinations, I published with Doctor Fenger's name my first article in medical literature.

"No one can understand the difficulties met with in those days by one investigating a bacteriologic subject in an eleemosynary hospital. The Passavant Hospital had no operating room facilities other than a gas stove, a copper wash boiler or two, a lot of granite ware wash basins and pitchers, a few slop pails and a few glass jars of sea sponges. There was plenty of green soap, carbolic acid, corrosive sublimate and iodoform. In the drug stores we were able to get antiseptic gauze prepared in Milwaukee by Mr. Schorse. He also sold catgut which he had sterilized. My examinations suggested that this sterilization was not always successful.

"In E. H. Sargent's drug store at 125 State street most drugs could be bought, but the articles necessary for bacterial study were ordered for each customer from Europe. Petri dishes were hard to get and I used watch glasses, thin drinking glasses and, at the suggestion of Dr. Henry Gradle, whiskey bottles turned on the side. Agar agar was also hard to come by, and gelatin in those days had many uncanny ways with it.



"Dr. Fenger had never seen a microbe growing in nutrient material when I showed him my "discoveries" in the County Hospital in 1884. I have seen botanists run upon a long-sought plant and astronomers discover a new double star, but never one of them showed more childlike delight than Doctor Fenger did when he saw my tubes of agar and of gelatin in which only a few hours before I had planted with a platinum needle invisible infection from the infected wound or abscess of one of his patients.

"Doctor Fenger was always an enthusiastic investigator and displayed a childlike curiosity. He was incredulous and difficult to convince by the very interest he felt and by the conviction he held and often expressed that great phenomena were passing before us and through our hands, which we were too stupid and self-blinded to observe."

In 1888 Holmes published a notable article on secondary mixed infection in typhoid fever, in which he showed that apparent relapses may be due to secondary infection. This paper, he wrote, was praised by Henry Gradle. This article was followed by others on mixed infection in some acute infectious diseases of children and in scarlet fever. He urged greater care in the isolation of typhoid fever patients and rightly, because at that time patients in the Cook County Hospital with tuberculosis, pneumonia, typhoid fever and other grave diseases were treated side by side without any special precautions. Holmes commented disappointedly on the negativistic attitude of conscientious and intelligent contemporary physicians toward bacteriologic teachings in those days. There was much talk, he said, about sewer gas as the cause of diphtheria and typhoid fever but only contemptuous references to the tubercle bacillus and other bacteria as causes of specific diseases. In 1890 he became "the first teacher of bacteriology in any medical school in Chicago" and organized a laboratory in the Chicago Medical College, in which he trained special students in bacteriologic methods. Adolph Gehrmann, the first bacteriologist in the Chicago health department, was one of his pupils. A report was published "from the Bacteriological Laboratory of Chicago Medical College" on cultures of *Staphylococcus* from an acute abscess in a tuberculous testicle. In practice Holmes was a surgeon. A successful, stimulating teacher, he became an important factor in the introduction of improved methods of medical teaching, especially by laboratory work, as shown in his reorganization of the curriculum in the College of Physicians and Surgeons of Chicago, in the creation and use of medical libraries and in the promotion of psychiatric research. He was a good writer and published many articles. He edited (in conjunction with Louis J. Mitchell) the first three volumes of the *North American Practitioner* (1889-1891), which reflects well the new medical spirit then stirring in Chicago.

During these years bacteriology in Chicago dealt almost exclusively with

bacteria as causes of human disease ("the germ theory of disease"). In the not distant University of Illinois (then called the Illinois Industrial University) bacteria early received consideration from the broad biologic point of view. In 1882 T. J. Burrill, professor of botany and horticulture, published a monograph on the bacteria, "silent-working denizens of the earth, the air, and the water," in which he gave an excellent account, fully abreast with that time in every respect, including a full description of the tubercle bacillus, of "their nature and effects, together with a systematic description of the species." Burrill was one of the first investigators in bacteriology in this country, describing in 1880 *Micrococcus amylovorus* as the cause of "blight" in plants, especially pear and apple trees.

Further evidence of growing general interest in bacteriology in Chicago are seen in the medical press. Koch's official report on cholera in Egypt was translated. Note is made of L. L. McArthur's demonstration (1885) in the medical society of cholera germs obtained in Koch's laboratory in Berlin. Farran's inoculations against yellow fever and cholera are mentioned. What is said to be the first report in this country of human actinomycosis was made to the Chicago Medical Society by J. B. Murphy. In the discussion Fenger and Belfield pointed out that the diagnosis rested on the microscopic demonstration of the fungus. Then A. Schirmer reported a case and A. J. Ochsner one involving the lungs; in both these cases the fungus was demonstrated.

Soon after Koch's discovery H. D. Schmidt, a pathologist of New Orleans, claimed that the "so-called tubercle bacilli" were merely fat crystals, but he retracted this claim and said that he would not have made any mistake if he could have seen the bacillus Koch described. Schmidt also doubted the reality of the leprosy bacillus; he presented his views before the State Microscopical Society of Illinois and asked that certain microscopic preparations of leprosy material in which he could not find any bacilli be referred to a committee. The report of the committee reads:

"The committee appointed for the purpose would report that they have examined the slides accompanying Dr. Schmidt's paper, and would say that they have been unable to find any bacilli in them. The slides appear to agree in every respect with Dr. Schmidt's statements in regard to them."

LESTER CURTIS, M.D.

*Prof. of Histology, Chicago Medical College*

JAMES NEVINS HYDE, M.D.

*Prof. Dermatology, Rush Medical College*

CHRISTIAN FENGER, M.D.

*Pathologist to the Cook County Hospital*

Frank Billings described the staining of the tubercle bacillus, basing his article on personal work.

From the foregoing account it is obvious that the influence of the German school predominated in the bacteriologic developments in Chicago. A persistent scoffer in the late eighties always referred to the germ theory as "the German theory." But Pasteur by no means was overlooked. His work is discussed in the books by Burrill, Belfield, Gradle and Black. Some of his lectures were published in translation. In 1886 and 1887 letters written from Paris by Chicago physicians describe personal visits to Pasteur in his laboratory, with special reference to his investigation of rabies. The Chicago Pasteur Institute for the prevention and treatment of rabies, the "first in the West," was founded by Antonio Lagorio in 1890.

In 1888 the foundations were laid for the quarantine of patients with diphtheria when the health department of the city issued the declaration that diphtheria is not a filth disease but a contagious disease like smallpox.

In 1889 Nicholas Senn published a review of the current literature on what he called surgical bacteriology. This book was translated into French. It is fitting to end these notes on the beginnings of bacteriology in Chicago with two quotations from Senn's book because they illustrate well the progress of bacteriology during the years covered by the notes and the author's grasp of its significance:

"Within a few years bacteriology has revolutionized surgical pathology. All wound complications and most of the acute and chronic inflammatory lesions which come under the treatment of the surgeon are caused by micro-organisms; hence the necessity of a proper recognition of the importance of bacteriology as an integral part of the science and practice of modern surgery. . . .

"At this time, surgical pathology has almost become synonymous with surgical bacteriology. Textbooks on surgical pathology of only a few years ago are consulted in vain for information on many subjects which now attract universal attention. Owing to the activity which is manifested everywhere in the investigation of the microbic cause of disease, the many discoveries which are being made in rapid succession, works on pathology soon become old, and are consigned to the shelves of the antiquarian almost before they have left the press."

This brings one to the close of the pioneer epoch in Chicago medicine. The modern epoch begins about 1890. New laboratories are organized in the medical schools; laboratory teaching is developed, and laboratory methods are introduced into clinical diagnosis; bacteriology is added to the curriculum; bacteriologic methods are introduced into public health work and bacteriologic principles are followed in the care of infectious diseases; and before long research in bacteriology is well under way.



## THE INTRODUCTION OF BACTERIOLOGY INTO THE MEDICAL CURRICULUM IN CHICAGO \*

By GEORGE H. WEAVER, M.D.†

ABOUT 1890 bacteriology appeared in the curriculum of the regular medical schools of Chicago. At first instruction was carried on by lectures and demonstrations to small groups of students who had elected such courses. In 1889 Bayard Holmes became director of the bacteriologic laboratory at Northwestern University Medical School, where for two years he gave lectures and demonstrations to small groups of students. Although the school had an equipped bacteriologic laboratory, no laboratory courses were offered to students. During this same period didactic discussions with demonstrations were given at the College of Physicians and Surgeons by Romain J. Curtis. In 1891 William T. Belfield became professor of bacteriology in Rush Medical College and began systematic lectures in his department.

Up to this time laboratory facilities for giving systematic courses in bacteriology to the large number of students were lacking in all the Chicago schools. The first move to correct this was made by the College of Physicians and Surgeons, and their lead was quickly followed by the other schools. The general movement in laboratory building at this time was largely due to the enthusiastic leadership of Bayard Holmes. When he became secretary of the College of Physicians and Surgeons in July 1891 he was also made professor of surgical pathology and bacteriology, and during 1891-1892 he instituted a laboratory course in bacteriology occupying two hours each week, for a limited class of students. He also persuaded the school to erect a laboratory building, and by the fall of 1892, a new building was completed, containing a completely equipped bacteriologic laboratory. Here were introduced courses in bacteriology for second year students, consisting of one lecture and four hours of laboratory work a week, with Adolph Gehrmann as demonstrator.

\* Reprinted from *Bull. Soc. Med. Hist. Chicago* 5: 1-2, 1937.

† Dr. George Weaver, well known for his studies in the early medical history of Illinois, was a member of the first committee that issued Volume I of this series. Some years before his death he published the paper which is reprinted herewith. Most of his data covers the period from approximately 1890 to 1900. He was at that time active as a teacher in this field and this information, therefore, is first-hand. The paper is in reality a continuation of or supplemental to the one prepared by Dr. Hektoen.—*Editor*

During the summer of 1892 the Northwestern University Woman's Medical School equipped bacteriologic laboratories, in which during 1892-1893, under the direction of Ludvig Hektoen, the second year students were given practical laboratory courses in bacteriology two hours daily, four days a week, with George H. Weaver as demonstrator. By the autumn of 1893 Rush Medical College had erected a laboratory building containing a well equipped bacteriologic laboratory, in which systematic courses were required of all second year students, under George H. Weaver as demonstrator. Here also for several years a postgraduate course in laboratory bacteriology was given each summer, beginning in 1894. In 1893 Northwestern University Medical School also erected a laboratory building containing ample facilities for teaching practical bacteriology. In 1892-1893 the students were required to take a laboratory course on staining pathogenic bacteria, but the making of cultures was optional. Just when systematic courses in laboratory bacteriology were first required is not evident, but by 1895 laboratory courses occupying six hours a week, supplemented by lectures (with recitations) one hour a week, given by John Davis Kales, were being required of second year students.

Thus between 1892 and 1895 systematic courses of laboratory instruction had been established in all the regular medical schools of Chicago as a part of the instruction of all students.

The laboratories were in charge of young men who served as demonstrators, and who were called on by hospitals and private practitioners to perform much clinical bacteriologic work, for which there was a rapidly growing demand.

## THE INTRODUCTION OF BACTERIOLOGY INTO THE SERVICE OF PUBLIC HEALTH IN CHICAGO \*

By FRED O. TONNEY, M.D.†

**B**ACTERIOLOGY first began its service of the public health in Chicago in 1893, in a small "cubby hole" back of a drug store owned by Prof. E. B. Stuart, at the corner of Thirty-Ninth Street and Cottage Grove Avenue. Here, after Dr. Stuart had been appointed by Mayor Hempstead

\* Extracted from a paper read before the Society of Medical History of Chicago and the Institute of Medicine of Chicago, in Joint session, Nov. 24, 1936, and published in *Bull. Soc. Med. Hist. Chicago* 5: 22, 1937.

† For many years Dr. Tonney was associated with the Department of Health of Chicago. He graduated from Loyola Medical School in 1909.—*Editor*

Washburne to the post of "Deputy Commissioner of Health," in charge of a newly created "Bureau of Milk Inspection," the first bacteriologic examinations for the city were made by Professor Stuart and his assistant, Dr. Adolph Gehrmann, microscopist for the health department. The work consisted of bacterial plate counts of milk and also an investigation of the incidence of tubercle bacilli in the milk supply of the city.

At the same time Prof. J. H. Salisbury, who had just been appointed city chemist, with the aid of Mr. Cass L. Kennecott, assistant chemist, conducted a series of chemical analyses of milk in the laboratory of the Woman's Medical College, at Lincoln and West Harrison Streets.

The first bacterial findings in milk were included in the report of the department of health of 1893, which also contained tables showing the total number of specimens examined by the new city laboratory.

On September 8 of that year, the new bureau of milk inspection was transferred by order of the city council to the department of health, and a municipal laboratory was officially authorized, to be financed from the revenues of the milk licenses. However, no provision for quarters for the new laboratory was made until the following January, when a single room on the top floor of the old city hall, at La Salle and Washington Streets, was assigned to this technical work. The laboratory equipment was installed very soon thereafter, and in February 1894 the municipal laboratory began to function, under the direction of Dr. Adolph Gehrmann, bacteriologist, with the aid of Mr. Cass L. Kennecott, city chemist, and one other assistant.

At first, only milk samples were examined in the laboratory, but as soon as possible, in response to popular demand, Dr. Gehrmann began the routine examination of throat cultures for diphtheria bacilli (October 1894) and also secured two horses for use in the production of the (then) new diphtheria antitoxin. During that year the work of the laboratory was also extended to include examination of the city water supply.

One item in the departmental report of this early period is typical of the demands made on municipal and state laboratories from the very beginning, for public health research. This item is a report of a series of microscopic examinations of 243 samples of market milk for tubercle bacilli. The conclusions drawn are most interesting, in the light of later experience with such direct microscopic tests of milk. "It is true that occasionally objects similar to tubercle bacillus would appear in the stained specimens, but they were never present in sufficient number to render the diagnosis positive, or to condemn the sample." The writer (anonymous) concludes that "the direct microscopic examination of milk for tubercle bacilli can be of value only in connection with veterinary inspection of "milch" cows.



Another interesting item in the report of the health department for 1894 illustrates the great pressure put on public health laboratories for increased service at that time: "It is highly desirable that the laboratory be given more space and more scientific assistants, because of the constantly increasing number of specimens received for which analysis is demanded."

In the fall of that year catastrophe suddenly threatened the infant city laboratory. The milk dealers had banded together and exerted so much political pressure on the city council that the entire laboratory appropriation for the next year (1895) was abolished in the annual budget "as a useless and an unnecessary public expense."

However, Dr. Arthur R. Reynolds, health commissioner, made a strong plea for continuance of the work and succeeded in having the appropriation restored. Thus the tiny laboratory, precursor of the present Division of Technical Service and Research of the Board of Health, was enabled to continue its work.

In 1895 several new items were added to the laboratory routine, viz., examination of ice samples, examination of smallpox vaccines and the Widal test for typhoid. In 1896 the diagnosis of rabies was added to the list, five dogs being examined, "all of which were negative."

In 1896 a sublaboratory for diagnosis of diphtheria was put into operation at 4300 Cottage Grove Avenue, under the direction of Dr. W. K. Jaques. In the report of that year, detailed directions on the method of taking throat cultures for diagnosis of diphtheria, prepared personally by Dr. Jaques, were published, together with a discussion by him of the diagnostic value of the new bacteriologic methods of diagnosis. The report also contained a brief résumé of a case of mixed diphtheritic and streptococcic angina, in which diphtheria antitoxin controlled the diphtheritic symptoms but did not affect the symptoms of the streptococci infection, which ran its usual course.

It should be noted that the original enactment under which the city laboratory was created had placed the responsibility of field work in milk inspection, food inspection and meat inspection under the laboratory. At first these field operations were a proper and logical adjunct to the pioneer technical work of the bacteriologic laboratory, but as time went on the burden of field activities became so great that it seriously hampered the management of the technical work of the laboratory. Again, with strange perversity, the appropriations made by the city council for the inspection services in the field grew much faster than those for the analytic services for their support in the laboratory.

In the early laboratory reports concern was repeatedly expressed about the safety of the city milk supply. The significance of the high bacterial counts so continuously found was frankly discussed and the conclusion

drawn that, although no "pathogenic organisms" were actually demonstrated, the "excessive numbers" of bacteria of all kinds in the samples indicated the probable presence of pathogens.

From 1899 to 1903 no official report of the health department was published. It was during this period that Dr. W. J. Class, assistant bacteriologist, began his investigations on the bacteriology of scarlet fever, the results of which were confirmed in later years. Dr. Adolph Gehrmann also published a series of articles during this period, dealing with the newly developed agglutination methods for diagnosis of typhoid fever, laboratory tests of smallpox vaccine necessary before its distribution for general use, and for the control of the bacterial content of milk.

From that time on the city laboratory continued to expand its routine services to the public year by year. One of the important contributions of this period is a report by the Sanitary District of Chicago entitled "Streams Examinations," published in 1902. The occasion for this report was the legal controversy between the city of Chicago and St. Louis over the alleged pollution of the Illinois River, a tributary of the Mississippi River at Grafton, Ill., by the sewage of Chicago, passing through the newly constructed sanitary drainage channel into the Illinois River at Lockport, Ill. Dr. Edwin O. Jordan, professor of bacteriology at the University of Chicago, was the guiding genius of this investigation. The report contains (a) a letter of transmittal from Dr. Arthur R. Reynolds, commissioner of health of the city of Chicago; (b) a report of the results of water analyses, by Dr. Adolph Gehrmann, city bacteriologist; (c) a report from the University of Chicago, by Edwin O. Jordan, Ph.D.; (d) a report from the University of Illinois, by A. W. Palmer, S.C.D., and (e) a report from the University of Illinois, by T. J. Burrill. In the general summary of the report, which was written personally by Dr. Jordan, this statement appears: "The facts indicate that the colon bacteria, present undoubtedly in much larger numbers than the typhoid bacteria, disappear completely in less than 50 miles of flow."

The steadily progressing development of the laboratory services of the city in the years 1893 to 1910 seems significant in that it presaged the much greater development to come in the next two decades.

## CHAPTER XIX

# HISTORY OF THE ANATOMY LAWS IN ILLINOIS DURING THE 19TH CENTURY\*

By OTTO F. KAMPMEIER, Ph.D., M.D.†

FOR a proper perspective of the subject here considered it seems necessary to project it on the background of the early political history of the state. This can be sketched briefly with lines that fit best our purpose. The voyages of Father Marquette and Joliet in the country of the Illinois Indians in 1673; the explorations of La Salle in 1680; the destruction of the great Illini village of "Cascashias"<sup>1</sup> in the same year and the almost total annihilation of its inhabitants and their French allies under Tonti by the Iroquois; the founding of the second Kaskaskia<sup>2</sup> soon after in the 'American Bottom'; the attempts of Louis XIV and his agents to exploit the territory to which the French laid claim; the "Mississippi Bubble" in 1719, this greatest of swindles in financial history; the revival of colonial expansion until the French and English Wars and the signing of the treaty in 1763; the eight years of British occupation before George Rogers Clark during the American Revolution won a stubborn hold on the Northwest Territory for the United States; the final renunciation of this territory by Great Britain in 1794—all these events pass in review before the person familiar with the history of Illinois.

Many documents and records have been preserved which throw light upon the practice of medicine in the lawless period between the Revolution and the beginning of the 19th century. During this period the for-

\* Submitted for publication, March, 1954. This chapter is an excerpt of a partly completed work *On the History of Anatomy in Illinois in the 19th Century*.

† For nearly thirty years, Dr. Kampmeier was Professor and Head of the Department of Anatomy at the University of Illinois. Since 1953, he has had the same positions at the School of Medicine, CME, Loma Linda, California. He early acquired the degree of Doctor of Philosophy at Princeton University and later took an M.D. at the University of Munich, Germany. Some years ago he spent a year or more in Egypt and the adjacent Orient. His anatomical museum at the University of Illinois is replete with historical illustrations and reminders of medical art.—Editor

<sup>1</sup> Near Starved Rock and the site of the present town of Ottawa on the Illinois River.

<sup>2</sup> Where the Okaw (now Kaskaskia) River flows into the Mississippi about 55 miles south of St. Louis.



tunes of the people in and around Southern Illinois were at the lowest mark. Inundations and pestilence continued to add to the woe and misery in the 'American Bottom.' The first considerable influx of settlers into Southern Illinois had occurred soon after the Revolution; these colonists came chiefly from Virginia. In 1797 more than a hundred of them joined the community of Kaskaskia, which in 1790 was the largest and most prosperous town west of the Allegheny Mountains, while others sought abodes that were healthier than this region.

Following the French and Indian War the "Illinois Country" was at first under the jurisdiction of the State of Virginia. About the year 1778 the General Assembly created the county of Illinois, probably the largest county in the world, for it contained the land now embraced by Ohio, Indiana, Wisconsin and Michigan. John Todd was appointed Lieutenant Commander of the district by Patrick Henry, then governor of Virginia. Immediately after the American Revolution, the Virginia Assembly

"at their session, commencing on the 20th day of October, 1783, passed an Act to authorize their delegates in Congress, to convey to the United States in the Congress assembled, all the rights of the commonwealth to the territory northward of the river Ohio."

The first legislative assembly of the Northwest Territory met in September of 1800. On May 7, of that year, Congress had acted to divide the territory northwest of the Ohio into two separate governments and established the Indiana Territory, Illinois becoming one of the counties of Indiana. Before 1800 the laws ruling the Northwest Territory, as ratified by its board of governor and judges, were taken from the codes of Pennsylvania, New York and Virginia. These laws were issued in four volumes, the first containing those of the years 1788 to 1791 and printed in Philadelphia in 1792 by Francis Childe and John Swayne, the second containing those of 1792 and issued by the same publishers in 1794, the third—"Maxwell's Code"—containing those of 1795 and printed the following year by W. Maxwell in Cincinnati, and the fourth presenting the laws of 1798 and issued in the same year by Edmund Freeman of that town.<sup>3</sup>

The "Territory of Illinois" was established in February, 1809, by Act of Congress. It defined

"that all that part of the Indiana Territory which lies west of the Wabash river and Post Vincennes due north, to the territorial line between the United States and Canada shall for the purpose of temporary government constitute a separate territory and be called Illinois."

Then that territory had a population of 9000 and included what is now

<sup>3</sup> James, Edmund J.: *Information Relating to the Territorial Laws of Illinois passed from 1809-1812*. Publications of the Illinois State Historical Library, Springfield, 1899.

the state of Wisconsin. A Board of Governor and Judges represented the sole legislative authority under Congress in this larger Illinois up to the meeting of the first territorial legislature in November, 1812, at Kaskaskia. The Act provided that authentic copies of the laws passed by the Governor and Judges should be sent every six months to the President of the United States for permanent preservation. For some reason or other, these laws, if they were ever sent to Washington, were not preserved, with the exception of four on file, nor were they printed so far as known in any document of the federal government.<sup>4</sup>

During the two decades immediately prior to 1818, when Illinois was elected to statehood, permanent settlements were planted in rapid succession in its southern regions. In that year most of its 35,000 inhabitants lived south of the mouth of the Illinois River. Four out of every six persons were of southern stock, one was of foreign origin, and one a northern emigrant. At first there was some animosity between the southern settlers and the 'Yankees,' but eventually "The Mississippi," "the river" or "Ole Man River" bound them together. The tide of immigration which had set in soon after the Revolution brought not only adventurous emigrants from the east through the Cumberland Gap and down the Ohio, but also up the Mississippi, especially large numbers of Germans, Irish and other foreign countrymen who had landed at the port of New Orleans and were seeking a home in the interior.

It is natural that Kaskaskia should have been selected as the seat of the territorial government. For it was in effect the first settlement of the white man in Illinois, and played the leading rôle not only in its early political but also in its early cultural and medical history, both during the period of the French occupation and during American territorial times. The first meetings of the territorial legislature—the Legislative Council and House of Representatives—of Illinois were held at Kaskaskia in 1812, one on December 12 and the other on December 26. The first printed edition of the laws passed at these sessions was issued in a pamphlet of 60 pages by Matthew Duncan at Russellville, Kentucky, the following year. The first law declared that all laws decreed by the Legislature of the Indiana Territory which were in force on March 1, 1809, and which are of general nature and not local to Indiana Territory, shall remain in force in the Illinois Territory until altered or repealed by the latter.

The building at Kaskaskia, in which the territorial government was instituted and made its decrees, and which served as the capitol until 1820 and even as the place of assembly during the organization of the state government, had been the headquarters of the Military Commandant dur-

<sup>4</sup> cf. James, *ibid.*

ing the French possession of the country, prior to 1763. As described by Judge Caton, of Ottawa, at the laying of the cornerstone of the third capitol at Springfield in 1868, it was a rough building in the center of a square in the village of Kaskaskia; its body was built of uncut limestone, its gambrel gable and roof of unpainted boards and shingles with dormer windows, and it contained a large cheerless room on its ground floor fitted up for the sessions of the House, while the Council sat in the smaller chamber above. At the time of Judge Caton's description there was probably no stone left to mark the spot where it stood, for already thirty years earlier it was a mass of ruins. Kaskaskia itself tragically came to an end in the 'nineties,' when the Mississippi changed its course and swirled over it leaving its site under deep water ever since. Today the traveller who loiters near the place will find only a relic of Kaskaskia on an adjoining bluff, the old Pierre Menard mansion in which La Fayette was entertained in 1825.

The laws drafted in the capitol of Kaskaskia reflect the character and the spirit of the pioneer days. In 1813 the territorial government enacted a law to elect commissioners authorized to lay out the streets of the "Town of Kaskaskia." In the following year we find laws concerning "Shawanoë Town," a tax on billiard tables, punishment for giving intoxicating drinks to Kaskaskia Indians, the establishment of towns, killing of wolves and the promotion of retaliation upon hostile Indians.

Only three years later, that is, in 1817, the territorial government of Illinois wrote a remarkable document: "An Act to incorporate medical societies for the purpose of regulating the practice of Physic and Surgery," perhaps the earliest of its kind in the United States.<sup>5</sup> Though it would seem that little heed was given to this law by the medical profession, it reveals a high level of conscience on the part of the lawmakers in trying to protect the people of Illinois territory from the charlatans, quacks, and ill-prepared doctors who were streaming into this frontier land with the colonists. The Act was approved and signed on December 31, 1817, by Ninian Edwards, the territorial governor.

<sup>5</sup> Section 3 of the Acts reads: "Be it further enacted, that the Medical Societies established as aforesaid, are hereby respectively empowered to examine all students who shall or may present themselves for that purpose, and give diplomas under the hand of the president and seal of the society, before whom such student shall be examined; which diploma shall be sufficient to empower the person so obtaining the same to practice physic or surgery, or both, as shall be set forth in the said diploma, in any part of the territory." It was further enacted in Section 5, "that from and after the organization of the said medical societies in the respective districts, no person shall commence the practice of physic or surgery in either of the aforesaid districts until he shall have passed an examination and received a diploma, or license as aforesaid; and if any person shall so practice without having obtained a diploma or license for that purpose, he shall forever thereafter be disqualified from collecting any debt or debts incurred by such practice in any court, or before any magistrate in the territory."



The preëminent part medical men took in the colonization of the State, often as leaders, has been told fully elsewhere.<sup>6</sup> These leaders had received their schooling and professional training either in the medical schools in the eastern part of the United States or in those of Europe, and they came imbued with a spirit of adventure and energy and with an urge to give their best possible service to the people. The truth of this statement is confirmed by the county histories where we read of the sacrifices and perseverance of the best of the pioneer doctors and the incredible hardships they endured to minister unto the sick and the suffering. That they were men of vision and ideals is shown in their influence in the passage of the early law, just mentioned, striving to put medical practice in the territory on a well-ordered basis. Yet this law appeared to remain a dead letter, for we find its reenactment in 1819, in the year following Illinois' entrance to statehood.

On April 18, 1818, Congress passed the "Act enabling the people of Illinois to form a constitution." The ordinance accepting this "Enabling Act" was adopted at Kaskaskia in August of the same year by the convention which framed the first constitution of the state, this constitution being adopted the same month. It decreed that the "seat of the government for the state shall be at Kaskaskia until the general assembly shall otherwise provide" for laying out a town on the banks of the Kaskaskia River, and so laid out "shall be the seat of government of this state for the term of twenty years." The constitution of 1818 made it obligatory upon the General Assembly to petition Congress for a grant of land upon which to locate the seat of the State government. It continued by saying,

"should, however, the prayer of the said petition not be granted, the General Assembly shall have power to make such provision for a permanent seat of government as may be necessary and shall fix the same where they may think best."

The land was granted by Congress.

Early in the following year the people of the State of Illinois, represented in the General Assembly, passed an Act, approved on February 4, 1819, declaring

"that the common law of England, all statutes or acts of the British Parliament made in aid of the common law, prior to the fourth year of the reign of King James the I excepting the second section of the sixth chapter of XLIII Elizabeth; the eighth chapter XIII Elizabeth, and the ninth chapter XXXIII Henry VIII and which are of a general nature and not local to that kingdom, shall be the rule of decision and shall be considered as of full force, until repealed by legislative authority."

<sup>6</sup> See Vol. I, *History of Medical Practice in Illinois*, (preceding 1850) compiled and edited by Lucius H. Zeuch, and issued in 1927 by the Illinois State Medical Society.

In the same month, one of the then most important laws<sup>7</sup> reaffirmed by the General Assembly was "An Act to Suppress Duelling," a law that had been taken from the Virginia Code and passed by the Governor and Judges of the Illinois Territory on April 7, 1810. For an era when the duel was still the favorite method of settling grievances stemming from supposed injury to honor, the wording of the law seems drastic. It read

"that any person who shall hereafter wilfully and maliciously, or by agreement fight a duel or single combat with any engine, instrument or weapon, the probable consequence of which might be the death of either party and in so doing shall kill his antagonist or any other person or persons, or inflict such wound as that person injured shall die thereof, within three months thereafter, such offender, his aiders, abettors and counsellors, being thereof duly convicted shall be guilty of murder and suffer death by being hanged by the neck; any law, usage of this state, to the contrary notwithstanding."

The law further added that "any officer taking office must swear that he has not been involved in any duel." There was absent one provision found in the laws of some of the eastern states against the same offense, namely, that the body of a person killed in a duel or put to death by law for participating in a duel shall be assigned to the medical profession for dissection. Massachusetts, immediately after the Revolutionary War, had revised the law 'Against Duelling'<sup>8</sup> and

"provided that the body of one killed in a duel should be turned over to any surgeon who might apply for it to be dissected. In the absence of such request the body was to be buried in the most public highway, near the scene of the duel, without a coffin and with a stake driven through the body."

To quote Waite:<sup>9</sup> "Thus dissection was made equivalent to the most disreputable burial that could be devised." This statute marks the first instance in New England of a law making mandatory the giving of a dead body for dissection. In 1805, Massachusetts extended the law to read:

"justice in case of murder committed in a duel shall, and in other cases may, at their discretion further sentence and order the body of such convict to be dissected and anatomized."<sup>10</sup>

<sup>7</sup> All references to the laws of Illinois cited in this chapter are based on the writer's perusal of the 'Statute Laws of the State of Illinois published under the direction and authority of the General Assembly.' Revisions of the laws were issued in 1827, 1845 (Purple's Statute's and Scates' Compilation), 1869, 1877 (Hurd's Revised Statutes) and thereafter.

<sup>8</sup> *Acts and Laws of the Commonwealth of Massachusetts: Passed in 1784.* 426 pp. Boston: Adams and House, 1784. P. 24.

<sup>9</sup> Waite, Frederick C.: *An Episode in Massachusetts in 1818 Related to the Teaching of Anatomy.* *New England Journal of Medicine*, vol. 220, 1939, pp. 221-227.

<sup>10</sup> *The General Laws of Massachusetts from the Adoption of the Constitution to February, 1822.* Vol. 2. 600 pp. Boston: Wells and Lilly and Cummings and Uillard, 1822. P. 120.

Here we have a clear statement that dissection was considered a posthumous punishment and by implication a powerful deterrent to capital crime, hence, quite in keeping with the abhorrence in which dissection and autopsy were held for centuries almost till our day. Evidently the law in Illinois even without such a 'deterrent' had the desired effect, for in the Statutes of 1845, under "Duelling," the punishment meted out to all participating (aiders, seconds, etc.) in the high misdemeanor is far less stringent, the punishment not exceeding 5 years, nor less than 1 year, by confinement to labor in the penitentiary, while persons carrying the challenge shall pay fines.

In March, 1819, decisive action was taken by the General Assembly to remove the seat of the state government from Kaskaskia to a site which five Commissioners were to select in accordance with the land appropriation made by Congress for the purpose. The commissioners chose an area farther up the Kaskaskia River about 75 miles "as the crow flies," northeast of Kaskaskia on the site of a settlement later known as Vandalia in Fayette County where a United States land office had existed as early as 1804, and where eleven years later Guy Beck and his wife were the first whites to settle in the county. In 1819 a colony of about 20 to 30 families from Hanover, Germany, was brought over by a philanthropic compatriot, Ferdinand Ernst, and established at Vandalia; these people soon took an active part in the organization of the county. The famed 'Cumberland Road' then served as the chief inlet of emigrants from the south and east of the country. After the commissioners had selected the site of the new state capital, they "were sorely puzzled in their efforts to choose a name that should be euphonious to attract the attention of the whole world." Governor Ford, in his 'History of Illinois' gives the following humorous account of the way it was done: "Tradition says that a wag, who was present, suggested to the Commissioners that the 'Vandals' were a powerful nation of Indians, who once inhabited the banks of the Kaskaskia River, and that "Vandalia" derived from the name would perpetuate the memory of that extinct but renowned people. The suggestion pleased the Commissioners, the name was adopted, and they thus proved that the cognomen of their new city—if they were fit representatives of their constituents—would better illustrate the character of the modern, than the ancient inhabitants of the country."

A two-story frame building was erected at Vandalia to function as the capitol, the archives at Kaskaskia were removed to it in December, 1820, and the 3rd General Assembly had their first session there two years later (Dec., 1822). Fire destroyed the building a few years later, and a larger brick structure was built on the same ground.

About this time—January 3, 1825—the state legislature approved "an



act to prevent the disinterment of the dead." Dr. Zeuch in Volume I of "The History of Medical Practice in Illinois (preceding 1850)" expressed the opinion that it manifested antagonism to the medical profession because it would hinder physicians and surgeons from obtaining and using human cadavers for dissection. But a reading of that law shows that though the lawmakers were swayed by the prejudices of the times, they did provide legal means of securing such anatomical material even if the material so obtained was woefully inadequate. For after the Act states that

"If any person or persons shall open the grave or tomb where the body or bodies of any deceased person or persons shall have been deposited, and shall remove the body or bodies or remains of any deceased person or persons from the grave or place of sepulture, for the purpose of dissection, or any surgical or anatomical experiment or any other purpose, without the knowledge and consent of the near relatives of the deceased, or shall in any way aid, assist, counsel or procure the same to be done, or shall aid or assist in any surgical or anatomical experiment therewith, or dissection thereof, knowing said body or bodies to have been so taken or removed from the place or places of their sepulture, every such person so offending, being thereof duly convicted, by indictment before the circuit court, shall forfeit and pay a fine not exceeding five hundred dollars, and shall be imprisoned in the common jail of the county, not more than twelve nor less than three months, at the discretion of the court, the fine for the use of the county to be paid as other fines are required to be," it is

"Provided that the provisions of this act shall not be construed to extend to the dissection of the body of any criminal, where the same has been or shall be directed to be delivered up for such dissection by competent authority."

For a clearer view of the progress of anatomical legislation in Illinois, it is appropriate to digress here and refer briefly to the history of such legislation in other parts of the United States that were colonized much earlier. A colonial writer, one named Eliot,<sup>11</sup> reports in a communication published in London in 1647, as follows:

"Our young students in Physic may be trained up better than yet they bee, who have onely theorectical knowledge and are forced to fall to practice before ever they saw an anatomie made, or duly trained up in making experiments for we never had but one anatomie in the Countrey, which Mr. Giles Firmin (now in England) did make and read upon very well, but no more of that now."

It is probable that this dissection was made at Ipswich, Massachusetts, sometime between 1641 and 1644 on a body acquired legally.<sup>12</sup> In 1641—twenty years after the landing of the Puritan pilgrims at Plymouth, Massachusetts—the colony had formulated its first code of laws known as "The Body of Liberties." Among its decrees is one which runs:

<sup>11</sup> Eliot, J.: *The Daybreaking if not the Sunrising of the Gospell with the Indians in New England*. 366 pp. London. Richard Cotes, 1647. Reprinted in *Collections of the Massachusetts Historical Society*, 98 pp. Vol. 4. Cambridge: Charles Folsom, 1834. P. 57.

<sup>12</sup> Waters, T. F.: *Ipswich in the Massachusetts Bay Colony*. 336 pp. Salem. The Salem Press, 1905.

"No man condemned to dye shall be put to death within fowere dayes after his condemnation unless the Corte see spetial cause to the contrary as in the case of martiall law, nor shall the body of any man so put to death be unburied twelve hours unless it be in the case of Anatomie."

The governor and council of the Massachusetts Bay Colony, recognizing how seldom the body of an executed murderer was made available for dissection, adopted a resolution in 1647 which said:

"We conceive it very necessary yt such as studies physick and churugery may have liberty to read + to anatomize once in four years some malefactor in case there be such as the Corte shall alow of."

Though the action of the leaders of the Massachusetts Bay Colony shows that they were wide awake to its needs, their resolution was not unusual for it had been customary and almost an unwritten rule for centuries that the bodies of criminals could be used by the doctors for anatomical study and experiment. Three centuries before the Christian era the Ptolemies legalized this practice at Alexandria, and fifteen centuries later at the dawn of European medicine the illustrious Hohenstaufen emperor Frederick II voiced the demand of dissection in his "Constitutiones" of 1221. Since then, and in similar wise, precedent and custom developed into common law and from this into statutory law in the different countries—Italy, Germany, France, Holland, England, etc.—at the same pace in which the episodes and scandals of 'grave-robbing' and 'body-snatching' increased in connection with the growing need for medical knowledge during the 'revival of learning' and the Renaissance. Long before 1505, when the magistrates of Edinburgh granted a "seal of cause" to the Guild of Surgeons and Barbers for the annual dissection of an executed criminal, such dissection had been sanctioned almost everywhere on the European continent. In the United States the various anatomical laws can be traced to the provisions in Great Britain, where we find the first reference to such an act by the English Parliament in 1540 in the reign of Henry VIII giving a chartered right to the Guild of Barbers and Surgeons of London<sup>13</sup> and stating in one of its clauses:

"That the said masters or governors of the mystery and commalty of barbers and surgeons of London and their successors yearly forever . . . . . shall and may have and take without contradiction four persons condemned, adjudged and put to death for felony . . . . . for anatomies without any further suit or labour to be made to the King's highness, his heirs or successors for the same; and to make incisions of said dead bodies . . . . . for further

<sup>13</sup> *The Statutes at Large from the Thirty-Second Year of King Henry VIII to the Seventh Year of King Edward VI Inclusive*. Edited by D. Pickering. Vol. V. 412 pp. Cambridge, England: Joseph Benthams (for Charles Bathurst), 1763. (Cited by Frederick C. Waite, in "Development of Anatomical Laws in the States of New England," published in the *New England Journal of Medicine*, vol. 233, 1945, pp. 716-720).

and better knowledge, instruction, insight, learning, and experience in the science, and faculty of surgery."

A special "charter for anatomies" was granted to the College of Physicians of London by Queen Elizabeth in 1564; it provided that four bodies of executed felons be annually delivered to that organization for anatomizing. A century later, Charles II (in 1663) increased the yearly quota of bodies to six and directed in addition that after they have been anatomized the remains should be "decently buried."

In his excellent account of the history of the Anatomy laws in New England, Professor Waite, already cited, shows how some phases of statutory law (i.e. the expressed declaration of the will of the legislature) were derived from common law (i. e. springing from the "accumulation of precedents, such as an act of a magistrate or a judge to which no objection was made by higher authority"). Blackstone, in his "Commentaries," wrote: "In every atrocious crime" judges were permitted to superadd "other instances of terror, pain and disgrace . . . . . such as in murder, public dissection." This procedure under common law became English statutory law in 1752, in the reign of George II, when Parliament proclaimed "An Act for better preventing the horrid Crime of Murder," which made the penalty of dissection mandatory, though "a power is allowed to the judge upon good and sufficient cause to respite the execution and relax the other restraints of the act." Its preamble said: "Whereas the horrid crime of murder has been more frequently perpetrated than formerly . . . . . and whereas it is thereby become necessary that some further terror and peculiar infamy be added to the punishment of death . . . . . ." If the murderer was executed in the City of London or in the County of Middlesex, his body should be conveyed immediately, according to the dictate of the statute, to the hall of the Surgeons' Company to be anatomized. Penalties were provided for any attempt to prevent dissection. If the execution took place outside the county, any surgeon willing was to do the dissection; otherwise the body was to be buried.

Thus, both precedent and English law sanctioned dissection in our country's colonial epoch, and the public took no objection to private lessons in Anatomy if conducted on executed criminals. Even post-mortem examination of prominent persons to benefit medical knowledge was permitted, for there is the report of Dr. Johannes Kerfbyle who autopsied Governor Slaughter of New York in 1690.<sup>14</sup> Sixty years later (1750), Drs. John Bard and Peter Middleton of New York City injected and dissected the body of Hermanus Carroll, a murderer, "for the instruction of the young men

<sup>14</sup> Hartwell, E. M.: The Hindrance to Anatomical Study in the United States, including a Special Record of the Struggles of our Early Anatomical Teachers. *Annals of Anat. and Surg.* Brooklyn, New York, vol. III, 1881, p. 209-225.



then engaged in the study of medicine." Thomas Cadwalader (1708-1779), a pupil of Cheselden, was the first to give such anatomical demonstrations in Philadelphia in 1751 for the enlightenment of the city's physicians. Dr. Thomas Wood in 1752 announced in New York papers that "a course of osteology and myology (would be given) in the city of New Brunswick, New Jersey." In 1754, William Hunter, a relative of the famous Hunters (John and William) in England, gave a series of public lectures at Newport, Rhode Island, on human and Comparative Anatomy. In 1762, William Shippen advertised, in the *Pennsylvania Gazette*, his anatomical lectures "at 5 pistoles each" and invited to them "any gentlemen who incline to see the subjects prepared for the lectures and learn the art of dissecting, injection, etc." for which they "are to pay 5 pistoles more." Shippen's course appears to have been the immediate forerunner of the organization of the medical school at Pennsylvania College in 1765. Soon, enthusiastic young physicians elsewhere fathered similar institutions in conjunction with various literary colleges, largely patterned after the English. The medical school of King's College (now Columbia University) in New York City was established in 1768; of Harvard College in Cambridge, Massachusetts, in 1783; of Dartmouth College, New Hampshire, in 1797; of the University of Maryland, in Baltimore, in 1807; of the College of the City of New York, in 1807; of Yale College in New Haven, Connecticut, in 1810; of Brown University, in Providence, Rhode Island, in 1811; the College of Physicians and Surgeons of the Western District of New York, at Fairfield, in 1812; Transylvania University, in Lexington, Kentucky, in 1817; Castleton Medical College, in Vermont, in 1819; Bowdoin College, in Portland, Maine, in 1820.

The fundamental and foremost problem confronting all medical schools right at their start was the teaching of Anatomy and how to procure a sufficient number of human bodies for dissection. As in England and other parts of Europe, so in this country before the enactment of state laws giving to medical colleges the remains of those dying without friends, professional "body-snatchers" were frequently employed to provide such material. The history of "grave-robbing" and the riots to which this practice led are so well-known, no further comment is necessary here except as it illuminates the proclamation of decrees that directly or indirectly touch upon the anatomy laws in Illinois. From 1765, when the house of Dr. Shippen in Philadelphia was attacked by a mob inflamed by the report that the churchyard had been despoiled to supply cadavers for his anatomy class,<sup>15</sup> to the climax in St. Charles, Illinois, in 1849, when a medical student, John Rood, was killed and his teacher, Dr. George W. Richards,

<sup>15</sup> Hartwell (*ibid*) speaking of Dr. Shippen's courage in continuing his Anatomy lectures, dissections and demonstrations for three years in the face of the growing animosity of the

permanently crippled by rioters, the state histories during the 19th century are replete with such incidents.

A step in the direction of laws that were to advance the pursuit of practical anatomy was taken by the Legislature of New York in 1789, immediately following the mob action, known as the "Doctor's Riot" (1788) that wrecked Dr. Richard Bayley's dissecting room at Columbia College and led to pillaging for two days until order was restored by military force.<sup>16</sup> "An Act" was passed "to prevent the Odious Practice of digging up and removing for the Purpose of Dissection, dead Bodies interred in Cemeteries or Burial Places." This law contained the provision that any offender convicted "of Murder, Arson, or Burglary for which he or she shall be sentenced to suffer Death, may" at the discretion of the Courts have the added "Judgment that the Body of such Offender shall be delivered to a Surgeon for Dissection."

The laws in this country that relate to grave-robbing have a curious history. In 1655, the assembly of Rhode Island decreed: "If any person shall be accused of robbing any grave if ye Corte be satisfied of the probation of it, ye party or parties shall be fined or suffer corporal punishment, or both as ye generall Corte of tryalls shall judge."<sup>17</sup>

Massachusetts in 1692, in the days of "Witch-hunting," adopted an "Act against Conjuration, Witchcraft, and Dealing with Evil and Wicked Spirits," which reads:

---

people of Philadelphia, quotes W. E. Horner, to the effect: "The house was frequently stoned, and the windows broken; and on one occasion Dr. Shippen's life was put into imminent danger. While engaged within, the populace assembled tumultuously around the house. His carriage fortunately was at the door, and the people supposing that he was in it made their first attack there. The windows of the carriage being up, they were speedily demolished with stones, and musket ball was shot through the body of the carriage. The coachman applied the whip to his horses and only saved himself and his vehicle by a rapid retreat under a shower of missiles. The Doctor hearing the uproar, ascertained its cause, and extricated himself through a private alley."—In apparent documentation of the above story, Dr. Shippen placed the following advertisement in the 'Pennsylvania Gazette' for September 26, 1765: "It has given Dr. Shippen much Pain to hear that notwithstanding all the Caution and Care he has taken to preserve the utmost Decency in opening and dissecting dead Bodies, which he has persevered in chiefly from the Motive of being useful to Mankind, some evil-minded Persons, either wantonly or maliciously have reported to his Disadvantage that he has taken up some Persons who were buried in the Church Burying Ground, which has disturbed the Minds of some of his worthy Fellow Citizens. The Doctor with much Pleasure, improves this Opportunity to declare that the Report is absolutely false; and to assure them that the Bodies he dissected were either of Persons who had wilfully murdered themselves or were publicly executed, except now and then one from the Potter's field, whose Death was owing to some particular Disease; and that he never had one Body from the Church."

<sup>16</sup> In the following year (1789), similar rioting broke out in Baltimore and the anatomical theater of Dr. John B. Davidge was destroyed by an incensed mob.

<sup>17</sup> Bartlett, John R.: *Records of the Colony of Rhode Island and Providence Plantations*. Providence, R. I., 1856.

"Be it enacted.....that if any person or persons..... shall take up any dead man, woman, or child out of his, her or their grave, or any other place where the dead body resteth, or the skin or bone or any other part of any dead person to be employed or used in any manner of witchcraft, sorcery, charm, or enchantment, he, she, or they shall suffer death."

The only English law that dealt with grave-robbing, during the period of the American colonies, made it a felony to take a shroud or other apparel which is the property of "whoever was in charge of the funeral." Also the person, if any, "who had a freehold of the soil may bring action of trespass against such as dig or disturb it."

Earlier, when there were no rigid laws against various major offenses, or when people believed in the efficacy of anathema, they tried to protect themselves also against pillage of their final resting place by uttering or inscribing a formal curse. From the many of such maledictions we may quote here that of Shakespeare from his own epitaph, still visible and obeyed at Stratford-on-Avon.

Good Friend, for Jesus' sake forbear  
To dig the dust enclosed here;  
Blessed be the man that spares these stones,  
And cursed be he that moves my bones.

The historian or archeologist on the trail of such curses, or allusions to them, is able to "unearth" them in different cemeteries throughout the world. A gravestone, not more than a century old, at Hoosick, New York, deserves to be quoted here:<sup>18</sup> "Ruth Sprague, aged nine, died 1846. She was stolen from the grave by Roderick R. Clow and dissected at Dr. P. M. Armstrong's office at Hoosick, New York, from which place her mutilated remains were obtained and deposited here.

Her body stolen by fiendish men,  
Her bones anatomized,  
Her soul, we trust, has risen to God,  
Where few physicians rise."

After the Revolutionary War the first statute in the United States directed specifically against stealing a dead body was enacted by New Hampshire in 1796, a few months after the authorities of Dartmouth College announced the inauguration of the teaching of medicine. The law provided as penalties a fine not to exceed \$1,000, imprisonment not to exceed one year, and public whipping not to exceed thirty-nine stripes,<sup>19</sup>

<sup>18</sup> Waite, Frederick C.: Grave Robbing in New England. *Bull. Med. Library Association*, vol. 33, 1945, pp. 272-294.

<sup>19</sup> The Second Epistle of Paul the Apostle to the Corinthians, XI, 24 cited by Waite, *ibid.* Waite remarks humorously: "It was a reduction by one from the original forty stripes applied by the early Hebrews, as recorded in the Old Testament." (5th Book of Moses, called Deuteronomy, XXV, 3).



any or all of these to be imposed at the discretion of the court. The State of Vermont whose border lay but one mile from Dartmouth College passed a like law in 1804. Soon, during subsequent years, other states of New England enacted statutes of the same kind, imposing greater or lesser penalties for grave-robbing, the severity of the punishment increasing as more medical schools sprang up and the number of their students grew. These laws not only defined the punishment for illegal disinterment, but also the same penalties for the transportation, the concealment or the presence of the dead body on the premises of the accused.

As the succeeding years showed, the laws against grave-robbing were difficult to enforce. Among the several reasons that come to mind, the least obvious is a legal one. To apply the term "theft" to taking a dead human body is not strictly correct, for "it is a well-recognized, and almost universal rule of law that a dead human body is not property, and that there is no true proprietary interest or right of property therein."<sup>20</sup> This is not mere pedantry, for "if a dead body were property in the true sense, it would follow that one might gain title thereto." Briefly stated, ownership is the right to the exclusive possession, use and enjoyment of the property. Thus, according to English Law, which governed the American colonies, and which was adopted by the United States and has been affirmed in numerous court decisions, a dead person is not property. "A corollary of this legal principle is that a person while living, cannot legally devise by will nor convey by gift or contract what will later be his dead body." Sir William Blackstone stated in his "Commentaries" that "the heir has a property in the monuments and escutcheons of his ancestors, yet he has none in their bodies or ashes." In 1869 the State of Maine tried to supercede this general principle with the enactment of a statute which said: "If any person requests during his life that his body be delivered to a regular physician or surgeon for the advancement of anatomical sciences after his death, it may be used for the purpose unless some kindred or friend asks within three days, that it be buried." More recently the states of New York, North Dakota, Oklahoma and South Dakota have specifically provided by statute that the decedent has the right to dispose of his body, or parts thereof, by will.<sup>21</sup> Most recently (1947), the state of California has enacted a like decree on the testamentary disposition of the body;<sup>22</sup> it may be that other states have proceeded similarly. From these

<sup>20</sup> Weinmann, George H.: A survey of the law concerning dead human bodies. (Issued under the auspices of the Committee on Medicolegal Problems), *Bulletin of the National Research Council*. No. 73. Dec. 1929.

<sup>21</sup> Cf. Weinmann, *ibid*.

<sup>22</sup> In the autumn of 1953, soon after assuming the headship in Anatomy in the School of Medicine of the College of Medical Evangelists at Loma Linda, California, the writer, while perusing the filed records and documents regarding the human bodies received,

modern decrees we gather that the ideas concerning the designation of a dead body as property are undergoing change. But certainly during the 19th century, a strict interpretation of the concept that there is no ownership in a dead human body could not render a culprit, who has exhumed such, liable in a civil suit for damages. It was necessary to find that some act, recognized by the law as tortious, had been committed. For example, if an individual went on the land of another to disinter a body buried there, the owner of the land could sue for trespassing, or the person who furnished the coffin or the wearing apparel of the corpse could bring action for damage done to such accoutrements, but nothing more. The only remedy lay in an indictment on such grounds.

Mention has already been made of the law passed in New York in 1789 which was designed to prevent grave-robbing by providing that felons sentenced to death shall be delivered to surgeons for dissection. Doubtlessly this law in New York influenced the enactment of laws pertaining to the same problem in neighboring states. In Connecticut the law of 1824 made legal the dissection of bodies of convicts, dying in prison, such disposition being subject to the judgment of the prison commissioners and depending, among other considerations, on the nature of the crime committed by the convict. We have seen that only a year later (1825), the state of Illinois in its "Act to prevent the disinterment of the dead" included a provision whereby the body of any criminal shall be directed to be delivered up for dissection by competent authority. All these laws, it is evident, not only reflected but reinforced the popular conception of dissection as an additional posthumous punishment. Such penalty, in the opinion of the laity, made even the subject of Anatomy odious; dissection of the body of a friend or of one who was merely poor, or unknown, would stigmatize his memory, that is, make him by implication a criminal—a sentiment which inhibited for a long time the securing of laws to designate bodies, buried at public expense, for the training of medical students. Human society has never resolved fully the paradox of its deep-rooted aversion to dissection and its insistent demand of anatomical familiarity and proficiency for its physicians in the treatment of its bodily ills.

It is evident that the anatomical material obtained legally was wholly insufficient in amount for the requirements of instruction. Fatal duels were few; nor was the supply of bodies of dead criminals much greater. "A statistical compilation made in Massachusetts in 1830 showed that for

---

dissected or to be dissected, was astonished to learn that 11 bodies had been willed in the short period of three years—all of them without any effort on the part of the school to influence the public toward such an enlightened policy. One wonders how abundant would be the donations of anatomical material if it were to discreetly publicize such aims and aid to science.

the thirty years from 1800 to 1829, inclusive, the total number of executions in that state averaged only little over two a year, and by no means all those to be executed were further sentenced to be dissected."<sup>23</sup> Since the number of medical schools in New England increased from one in 1784 to eight in 1823, and since all of their students were expected to do human dissection, it is evident that the choice was between two alternatives; either to abandon the teaching of practical anatomy, or to make adequate provision for dissection by stealing bodies from graves. The thirst for knowledge and the aim of proficiency in the practice of medicine could not resist for long the second alternative.

Accurate statistics can never be arrived at to tell us how many graves were robbed to advance medical science. On the basis of the number of graduates of medical schools from 1800 to 1900, and on inaccurate estimates of the number of students who attended such schools without graduation, including those who studied medicine only under preceptors, Professor Waite ventures to say that cemeteries, churchyards, and private burial plots in New England have far more empty graves than is supposed. It is his estimate that more than 1600 students who did dissection in Vermont alone from 1820 to 1840 used at least 400 cadavers, for "six students commonly participated in a dissection done in a medical college, and fewer, often only one—in a dissection done with a preceptor." Waite's conservative conjecture places the number of grave-robbings in New England in the 19th century at a few thousand.

In view of the relatively few open riots against medical colleges because of grave-robbing, the calculation of Waite may seem too high. But we should not forget that disinterments of this kind were seldom detected, and still more seldom were the perpetrators apprehended, convicted or punished. Discovery in many cases came many years later when the dead were to be removed or transferred to another burial site and the excavation of the graves disclosed no skeletal remains. Moreover body-snatching occurred probably more often in the potter's field<sup>24</sup> or from graves of obscure or friendless persons. Consequently, little ado was made when such a theft came to light.

But unlawful exhumation of the dead was discovered often enough to inflame the public and to demand more rigorous laws against grave-robbing. At the same time it was aware of the inefficacy of the laws and therefore invented various procedures to prevent such theft or to make this more difficult. Filling the grave with a mixture of straw and soil, or of sticks and stones, or placing planks or anchoring a grid of iron over the

<sup>23</sup> Waite, *ibid.*

<sup>24</sup> See Waite: *Grave Robbing in New England* already cited, for the origin of the designation "potter's field."



rough-box that enclosed the coffin, impeded the spade or made a quick theft virtually impossible. Some cemeteries had public vaults, securely built of stone and locked with an iron door, in which bodies were placed temporarily until removed for permanent burial later. Sometimes a body was interred in the garden of the home of the deceased and then, after some days, exhumed and transferred to the cemetery. Or sometimes well-to-do families hired a watcher, armed with a shotgun to guard the grave during the nights of the first week or ten days, after which period the unembalmed body was deemed unfit for dissection.

Commensurate with these various countermeasures was the development of the ingenuity, technique and art of the grave-robbers. To render the grave-watcher harmless was usually not the most difficult task. "An agent of those who planned a disinterment plied the watcher with whiskey late in the afternoon to such extent that he failed to arrive at the graveside, or arriving he slept soundly at his post."<sup>25</sup> There are tales, too, of sleepy watchers, in the late hours of the night, being surprised, gagged and bound.

The acquisition of bodies for dissection was seasonal, corresponding to the periods when medical schools were in session, because during most of the 19th century few of these institutions had provision for preserving bodies. Since the majority of the schools gave anatomical instruction during the autumn and winter, the procuring of cadavers generally ceased during the spring and summer. From what has been said, it is apparent that it was important to steal a body as soon as possible after burial; if possible, in the first night. Then, too, the grass and ground which had been trampled at the time of the funeral would betray less tell-tale signs of despoliation. Private burial plots on farms, or cemeteries, lying some distance from the farthest dwellings of a village or town, were the favored because least hazardous locations for disinterments. A graveyard more than twenty miles from a medical college was usually safe from plundering because a span of horses conveying the stolen body could not traverse a greater distance during the night in time to arrive at the college before dawn and before early risers might see suspicious activities there.

We need not dwell here on the carefully worked out technique of the grave-robbers, since this has been detailed by Waite and others.<sup>26</sup> These writers describe the methods used in obtaining knowledge of prospective burials and in locating the grave accurately, the number of persons necessary to do the job promptly, the equipment, the manner of getting at the coffin and removing the body from it, the restoration of the original outward appearance of the site, the transportation of the body to the place of dissection, and the subsequent steps taken to destroy the evidence.

<sup>25</sup> Waite, *ibid.*

<sup>26</sup> Waite, in his writings, gives an extensive bibliography.

Because of the motives behind grave-robbing and the means employed in it, there is little wonder that a considerable popular literature has accumulated about it. The best known tales in English literature are "The Honest Tradesman" by Charles Dickens, "The Body Snatcher" by Robert Louis Stevenson, and "The Diary of a Resurrectionist" by J. B. Bailey, published respectively in 1859, 1884 and 1896. Though cleverly written and fascinating, these accounts are not as accurate, authentic or well-documented as the book "Sack 'Em Up Men," published in 1928 by James M. Ball, a physician in St. Louis, whose interest in medical history led him to study extensively the records in both Europe and the United States and to write one of the best illustrated accounts available.

The general public associated grave-robbing wholly with dissection in medical schools. It little suspected that preceptors in their private instruction of students and that practicing physicians, wishing to improve their surgical skill, especially when preparing for a new or difficult operation, were just as guilty—if the term guilty is to be applied—as medical schools in the utilization of resurrected bodies. Though it is true that these institutions were the biggest users of such material, popular opinion was in error when it held that grave-robbing was done chiefly by medical students. The authorities of medical colleges periodically published in catalogues and in newspapers their regulations forbidding students on penalty of dismissal to disinter bodies. This prohibition was not announced to mislead the public, but sprang from self-interest since they knew that the inexperienced medical students would bungle the job of grave-robbing, and consequently lead to detection and embarrassment for the school. It was the duty of the demonstrator to procure material for dissection; he got his position as much for his art in 'body-snatching' as for his knowledge of anatomy. He either participated personally in disinterments, or he selected, trained, directed and paid well a few able-bodied laymen, as agents, to do such work for him. Though medical students sometimes assisted, they not often attempted a grave-robbing independently.

On the night of January 10, 1818, during a snowstorm, an episode occurred in the hillside graveyard of Chebacco Parish,<sup>27</sup> a part of the town of Ipswich, Massachusetts, which eventually led to important promotions in medical education in the United States. The gleam of a lantern had been seen there shortly after the burial of a young woman. When the snow melted a hair-comb of peculiar design, known to have ornamented the

<sup>27</sup> Crowell, R.: *Interment of the Dead, a Dictate of Natural Affection, Sanctioned by the Word of God, and the Examples of the Good in Every Age*. A sermon delivered in Ipswich Second Parish, July 23, 1818, on the occasion of the reinterment of the coffins which had been robbed of their contents. Preached and published at the particular request of the inhabitants of the place. 40 pp. Andover: Flag and Gould, 1818.

corpse as it lay in the coffin, was found beside the grave. The aroused suspicions of the parishioners led to the opening of the grave; it was found empty, as were also seven other graves of persons who had died that fall or winter. Thomas Sewall, a local doctor who was teaching surgery to a group of students at the time, was arrested when identifiable parts of human bodies were discovered on his premises. He was tried and convicted—though defended by an able and eloquent attorney, Daniel Webster—to pay a fine of \$800 for wilfully receiving, concealing and disposing “of the human body and remains thereof of one Sally Andrews and of one William Burnham.”<sup>28</sup>

Knowing that Dr. Sewall's practice at Ipswich was ruined, Mr. Webster, then a member of Congress, invited him to start anew in Washington, D. C. Here, Sewall soon rose to national prominence for founding (1825) the capital's first medical school (Columbia College, now George Washington University). At first he served as its professor of anatomy and physiology, then as professor of medicine, and he was its dean for 19 years. He also became the personal physician of three presidents of the United States. Early (1825), too, he wrote a comprehensive treatise on Medical Education in the United States, the first up to that time or, perhaps more correctly speaking, the first since John Morgan delivered his “Discourse upon the Institution of Medical Schools in America” at the anniversary Commencement held in the College of Philadelphia, May 30 and 31, 1765. Sewall advocated a National Medical Organization. He died in 1845 at the age of 49.

Another sequel to the sequence of events and circumstances which followed the exploit at Chebacco Parish was the passage of a bill in Massachusetts in 1831, entitled: “An Act more effectively to Protect the Sepulchres of the Dead and to Legalize the Study of Anatomy in Certain Cases.” Professor Waite, in his paper on “The Development of Anatomical Laws in the States of New England,” already quoted, enters fully into the history of this statute. The medical profession had long desired more adequate legal measures for instruction in anatomy, and had repeatedly asked legislatures to provide relief from the distasteful business of grave-robbing. But the legislators paid little attention to these requests because of the well-known aversion of their constituents to dissection. It remained for the Massachusetts Medical Society to take concerted action and to make the first breach in the opposition. In February, 1829, Dr. Abel Lawrence Peirson introduced a resolution to appoint a committee of the society to seek the proper legislation. This initiated the action that led eventually to

<sup>28</sup> Waite, in his paper “An Episode in Massachusetts in 1818 Related to the Teaching of Anatomy,” already cited, gives in detail the history and the court proceedings of this case.



the passage in 1831 of the bill just named. It is of historic significance, for according to Waite it may be considered to represent the first effective anatomical law in any English-speaking country, and it antedated the Anatomy Act of the English Parliament by fifteen months.

This new law in Massachusetts, which gained public approval, *permitted* civil officials to surrender for dissection any body that must otherwise be buried at public expense. The law, however, was defective, because it contained exceptions and because it was not mandatory. Amendments during subsequent years somewhat improved it. Meanwhile the repugnant business of grave-robbing persisted and continued to agitate the public mind.

As the population grew and the need for more physicians called forth more medical schools and preceptors, the number of unlawful disinterments and resulting scandals and mob actions grew in proportion. Among the many incidents of this sort was the famous "Hubbardton Raid" at the Vermont Academy of Medicine at Castleton in 1830, after the discovery that a grave of a woman had been emptied. Waite has dramatically described the event, and also called attention to the long poem, bearing the title "Song of the Hubbardton Raid," written and declaimed by Dr. John M. Currier at an "Oyster Supper" in Castleton on November 29, 1879, to commemorate the 49th anniversary of the episode. This poem, 500 lines long and written in the style of Longfellow's "Hiawatha," is a unique item in American medical literature.

It is plain, from all the discussion up to this point about 'Anatomy Laws,' that Illinois, then a frontier state, was also in the forefront—and in some instances in advance—of medical legislation farther East. This is truly remarkable and induced Dr. Zeuch to say that "it is difficult to understand just what actuated the solons to enact this law" of 1825, when there was no medical college in the state at that time. But apparently he overlooked the fact that the medical student of those times received his training either in whole or in part under a preceptor in his office and on his rounds, and that some preceptors were assiduous in their teaching duties to the extremity of desecrating a grave in order to dispense anatomical knowledge first hand. Such preceptors, with a strongly developed calling to teach, some of them later becoming the founders of medical schools in Illinois, were emigrating as young men from the East, and entering the state either by way of the Cumberland Road, or by way of the Iroquois Trail in New York to Buffalo, thence along the Great Lakes to Chicago. As described elsewhere (see Zeuch, p. 644), several of these great teachers in the West (Daniel Meeker, Daniel Brainard, George W. Richards, David Prince, and later Nathan S. Davis) came from the lowly country medical school at Fairfield in New York.

Connecticut and New Hampshire promulgated laws almost identical with the Massachusetts law of 1831, but they were repealed shortly afterwards, indicating the extent and strength of popular disapproval. That Massachusetts was able to secure and maintain its law probably rested on the program of education which the state's medical society instituted in this matter, and perhaps also on the fact that many members of the State Legislature were graduates of Harvard University and could bring their weight to bear directly on a problem which concerned their alma mater primarily. It required further growth of enlightened public opinion, which growth is ever slow, and the impetus of concentrated effort, as represented by the establishment of the American Medical Association, for example, to influence legislation in the direction of more effective anatomical preparation also in other parts of the Union.

As already pointed out, the laws against grave-robbing were difficult to enforce. According to Waite, who examined all records of the County Courts in Vermont dealing with crimes during the twenty-year period between 1820 and 1840, there were only seven indictments for the felony of "disinterring the body of the dead." These indictments involved four grave-robbings and five offenders; one of these men was never brought to trial, two were acquitted by a jury, while two others were convicted and punished. It was during the same twenty years that at least 400 cadavers were dissected, as previously stated, of which not more than a score could have been procured legally. These reports prove how rarely a grave-robbing was detected or perpetrators were apprehended.

The two convictions in Vermont just mentioned had a most interesting sequel in the medical history of Illinois, as the present writer has learned. He will introduce its circumstances only briefly here, since he intends to recite them more fully in his projected work dealing with the history of anatomy in our state. Long after the death of the two persons implicated, we are permitted, we believe, to bring them from obscurity or oblivion and to inscribe them on the roll of honor as martyrs to Science and therefore among its immortals. These men served a prison sentence—perhaps the only sentence anywhere in the United States for "disinterring the body of the dead."<sup>29</sup> In March, 1834, two graves were found empty at Burling-

<sup>29</sup> *Journal of the General Assembly of the State of Vermont* for the Session begun and holden at Montpelier, Washington County on the 14th day of October 1834 (Montpelier, Vt. 1834), p. 240, and *Burlington Sentinel* (Burlington, Vt., March 28, 1834), p. 2, Col. 5, cited by Waite, *ibid.* Waite quotes in full a document signed by 125 citizens of Burlington, and sent to the Faculty of the Medical College at Woodstock, on March 25, 1834: "Gentlemen, The Examination of John F. Daggett, bound over for trial at the next term of the County Court, recently a student in your institution, as well as very intelligible intimations from him since his trial renders it certain, in the opinion of the undersigned and of this community that the body of Mrs. Holbrook late of this place was removed to Woodstock and is now in your college. Mrs. Holbrook was, and her family

ton, Vermont. Two brothers, the younger one a student at the Clinical School of Medicine at Woodstock, were arrested for the felony, tried and convicted. For some reason the judge in this case, unlike other judges who, recognizing the inadequacy of the Anatomy laws, were extremely lenient in punishing the illegal acquisition of human material for dissection, imposed the full minimum sentence defined in the statute, namely three years in the state prison. The records of the Vermont State Prison show that the older of the two brothers served the full sentence. The younger brother, John, released after serving part of the sentence, returned to the Woodstock Medical College, was graduated and left immediately for the West. Dr. Zeuch, in his biographical notations about outstanding physicians in Will County, Illinois, reports the following regarding a Dr. John F. Daggett, on page 531 (*Hist. of Med. Practice in Illinois*, vol. I): "Born in Vermont in 1815. He began teaching at the age of sixteen. At nineteen he studied medicine at Woodstock, Vermont, and later at Pittsfield, Massachusetts, graduating from the school of Woodstock in 1836. Beginning the practice of medicine at Lockport" (6 miles north of Joliet) "in 1838, he continued for forty years there, and it is stated that for many years he did all the practical operative surgery in the county about. He was elected to the senate in 1871." Zeuch says nothing—and probably knew nothing—about the episode that interests us here, and it was by mere accident or coincidence that the present writer became aware of the identity of the medical student who had been confined to a Vermont prison for his anatomical zeal. We are not satisfied that the meager sketch of Dr. Daggett given by Zeuch or in "A History of Will County," published (Wm. L. Baron Jr. and Co.) in Chicago in 1878, does justice to the full stature of the man. The latter report has a few additional data and a portrait (lithograph) of Dr. Daggett. This report (in 1878) states that he still lives in Lockport and, "though 63 years, the Doctor looks at if he was good to practice his profession 40 years longer." He "owns 500 acres in Lockport township, also

---

are highly respectable; and the disinterment of her remains has occasioned to her relatives a distress which you can properly appreciate, and is universally regarded as a vile outrage which will not be submitted to unless the laws have lost their power to punish.

"Information upon which we rely renders it probably that the dissecting knife has not been used upon her remains; and the undersigned submit to you, Gentlemen, whether your duty to the public does not demand that her body shall be restored. We are willing to believe that gentlemen so respectable as the Faculty of the Woodstock Medical School would countenance in the smallest degree an outrage of the kind—and although we fully believe that the true character of the outrage was unknown to you at the time, and would be indignantly reprobated at any time, yet we can have little doubt that your endeavors to procure the restoration of the body would be successful, and probably would be the sole means of effecting it.

"We ask, therefore, your assistance and believe it will be granted, as due to justice, to the feelings of a family lacerated for the means, the atrocious motive of gain, to public opinion and to the character of your institution. Yours respectfully—"



a mill on the Des Plaines River just below the town of Lockport; this mill was built in 1836 or 1837 and operates four run of stone."<sup>30</sup>

A search for more material concerning Dr. Daggett has been begun. Two days spent by the writer in Lockport and its vicinity in interviews with old settlers of Will County—two of them between 80 and 90 years old—who knew him directly, have brought to light data and anecdotes which have stirred the wish to know more about him and which, it is hoped, will result in a more satisfactory account to be published later. In the present chapter we will come back to Dr. Daggett in connection with legislation sponsored by him as state senator.

As early as 1832 the question of removing the state capital of Illinois farther north began to agitate the General Assembly. The citizens of Vandalia made a valiant effort to check this movement by building on their own initiative and at their own expense a capitol and donating it to the State. However, the more central position of Springfield and the irresistible methods of the delegation from Sangamon County to the General Assembly, known as the 'Long Nine'—being much taller than the average of human stature (Archer G. Herdon and John Fletcher, in the Senate, and Abraham Lincoln, Ninian W. Edwards, John Dawson, Andrew McCormick, William F. Elkin and Robert L. Wilson, in the House)—with Lincoln at their head prevailed and Springfield became the state capital in 1837. That the legislature had grown tired of the preponderance of venison, wild turkey, wild duck and other game meats supplied them at Vandalia, may have been a contributing reason for the removal of the State capitol to Springfield "where they could get more pork and beef!" Another reason given was that the Kaskaskia River bottoms around Vandalia were too unhealthy, just as malaria had been the bane of the first capital at Kaskaskia. Soon after the legislature adjourned at Vandalia in March, 1837, a public festival was held to honor the new legislature because of the selection of Springfield for the site of the new capitol, at which toasts were made by Abraham Lincoln and Stephen Douglas. Judge Caton of Ottawa referring to this celebration in his speech at the laying of the cornerstone of the present capitol at Springfield in 1868 said "a tradition still lingers here that something stronger than water was used in drinking the toasts on that occasion, as there was not a man to be found after the festival that could tell who made the last speech."

The citizens of Fayette County and its county seat, Vandalia, were re-

<sup>30</sup> Daggett married Angelina Talcott, of New York, a sister of Edward B. Talcott, one of the engineers who surveyed and laid out the Illinois and Michigan Canal. She died in 1844, without issue. In 1846 he married Cleora M. Parsons, who bore him five children. One of the daughters became the wife of Hugo von Boehme, city surveyor and architect of Joliet.

imbursed for their expenditure on the State House there. That edifice is now a historic shrine and serves as a museum and is maintained by the state. For a time the town of Vandalia lost its importance, as shown by the decline of its population from 2500 in 1837 to only 419 in 1850.

The fifteen years during which the state legislature convened at Vandalia stamped its impression on the cultural and medical history of the state. A number of colleges were incorporated, public libraries were authorized, and other legislation that had a bearing on the subject of dissection of human bodies enacted, as already described. That the previous laws prescribing the mode of licensing physicians had not been found satisfactory is shown by an act, approved by the state legislature in January 1825, concerning the appointment of censors in districts of the state and the duty of said board of censors to inspect the diplomas or certificates of Medical Colleges or "respectable Medical Societies" before licensing physicians.

In the Statute Laws of the State of Illinois published in 1827 by authority of the General Assembly, section 136, pertaining to disinterring the dead—essentially the Act of 1825—is listed under the division "Offenses against the Public Morality, Health and Police." Not much later the legislature made more definite provisions towards legalizing dissection in a limited degree, for in the criminal code of 1833, section 156, dealing with murder, states that the "punishment of death shall be inflicted by hanging," and in the paragraph immediately following provides that "the court may order, on the application of any respectable surgeon or surgeons, that the body of the convict shall, after death, be delivered to such surgeon or surgeons for dissection." This principle was reaffirmed in the Statutes of 1845, and then again in 1877, with the revision, however, that such dissection can only be made if there is no objection to it by some relative of the convict.

In the Statutes of 1845, the act of 1825 regarding the "disinterment of the dead" is revised and its wording is changed, being a little less verbose and appearing under the caption "Opening any grave." Punishment is not by imprisonment but by payment of a fine that shall not exceed \$500. Another section has a paragraph on "Trespassers." Apparently this legislation was not stringent enough, for several years later (1851) after the "grave-robbing" episodes in connection with the medical schools at St. Charles, Jacksonville and Rock Island (founded respectively in 1842, 1843 and 1848) had infuriated the public, there was published under the division of "Cemeteries" a law entitled "Trespassers Punished" which, with the Act quoted in full, was to insure the dead doubly against the depredations of the anatomists. This supplementary law said that

"if any person shall willfully or maliciously cut down, break down, level, demolish or otherwise destroy, injure or damage any railing, fence, or other enclosure around or upon any land conveyed under the provisions of this act, or any gate

or post thereon, or shall remove, break, injure or deface any tomb or other stone, or any post, plank or board, or any description thereon, or shall cut down, destroy, or remove any tree or shrub standing or growing upon such land, he shall be liable to indictment, and upon conviction thereof to be fined not less than \$10, nor more than \$100."

Fines for such misdemeanors are the same in the laws of 1869.

Since the Illinois State Medical Society eventually took a foremost part in the legislation concerning dissection, it is of interest here to note that in 1840 a convention was called at Springfield to organize a state medical society. This first organization met yearly, including 1847, but seems not to have lasted much longer. The present Illinois State Medical Society had its birth in 1850.

That the laws assigning the dead bodies of convicts to surgeons for dissection were ineffectual, and that the laws against "grave-robbing" did not stop the illegal procurement of human cadavers for anatomical study has been shown by the episodes of "body-snatching" already alluded to. The tragedy at St. Charles<sup>31</sup> stung the leaders of the medical profession in the state to action. In 1851, at the 2nd annual meeting of the Illinois State Medical Society, Dr. Elias S. Cooper, a young surgeon in Peoria, offered the following preamble and resolution:

"Whereas, the present laws and public sentiment of the people of the State of Illinois are strict and binding, holding the Physician and Surgeon legally responsible for the performance of their duty, but at the same time are hostile to those means by which a practical knowledge of pathology, skill, and surgical anatomy is obtained; therefore be it resolved, that a Committee of three be appointed to investigate the subject of legal dissection in all its relations and bearings, and report the same to this Society at its next meeting." (Proceedings, June 3rd).

The Resolution was adopted, and Dr. W. B. Herrick, the first president of the Society, appointed a "Committee on Legal Dissections," consisting of Drs. Cooper, as chairman, J. C. Frye (of Peoria) and W. Chamberlain (of Toulon). In the following year, at the Jacksonville meeting, Dr. Cooper, in response to the request for his report, stated that the spirit of his resolution of the previous year was not embodied in the record, as found in the printed minutes of the "Transactions," and that his committee was not to report to this society but was to memorialize the Legislature on the subject. He had nothing further to say.

<sup>31</sup> See Chapter VII "The Resurrectionists" in the *History of De Kalb County* (pp. 95-105) by Henry L. Boies, published in Chicago in 1868; also *History of Kane County in the Historical Encyclopedia of Illinois*, Munsell Publ. Co., 1904, and Vol. 1, (pp. 542-548) *History of Medical Practice in Illinois*, preceding 1850, edited by Dr. Lucius Zeuch, and published in 1927. Although the narratives as given there appear to be accurate in the main, the present writer by further investigation on the spot has been able to correct certain details or to enlarge upon them, which he intends to publish at another time.



About this time, a law—as seen in the 3rd edition of the Statutes of Illinois from the years 1818 to 1869—was passed holding railroads and other carriers (steamboats and the like) liable for importing deceased paupers, and consequently “liable for all such charges as become necessary, in holding a coroner’s inquest and a decent burial, and the necessary expenses of the same.” There seems no doubt that this injunction was levelled directly at surgeons and anatomists who because of the fatal bloodshed in the rioting incident to the “grave-robbing” at St. Charles had to resort to other means of procuring human cadavers for dissection.

In understanding the law just mentioned, we need to retrace our steps once more. During a number of years following the episode in which Dr. Daggett was involved as a medical student, the Woodstock Medical College in Vermont directed especial attention to its announcement: “No subject for dissection will be received from any person at any time.” This announcement was typical of like statements appearing in the bulletins of the medical schools of those times, as new centers of medical instruction arose. In many cases the charter for such a school could be secured, or its continued existence assured, only after the publication of a pledge, or the proclamation of the resolution: that no subject for use of the institution “shall be taken from any graveyard or burying ground in the County; but such as may be necessary shall be procured from the great seaports of the neighboring States.”<sup>32</sup> That cadavers often were transported from great distances is confirmed by the report about Dr. Beck “early in the thirties” having “carried bodies in a buggy all the way from Boston to Albany in order to supply material to his classes in the latter city.”<sup>33</sup> Already at the end of the 18th century, as Dr. John Warren relates, agents were employed in New York City to furnish dissecting material for his teaching at the Harvard Medical School.<sup>34</sup>

Waite refers to the personal reminiscences of one who had intimate knowledge of the medical college at Castleton, Vermont, “that some bodies were received from Albany and Troy, New York, about fifty miles distant, but hardly deserving the name of ‘great seaports.’” These bodies were shipped in brine barrels marked ‘beef’ or ‘pork’ and consigned to a local groceryman. They were conveyed part of the way on canal boats and the remainder of the way in wagons.”<sup>35</sup>

Despite the assertions in the announcements of the country medical

<sup>32</sup> Waite, *ibid.*

<sup>33</sup> Bardeen, Charles R.: *Anatomy in America. Bull. of Univ. of Wisconsin*, No. 115, Science Series, Vol. 3., Madison, Wis. 1905.

<sup>34</sup> Harrington, Thomas F.: *The Harvard Medical School, a History, Narrative and Documentary*. New York and Chicago, 1905, II, p. 655.

<sup>35</sup> Sanford, James: *Reminiscences of Castleton Medical College. Rutland Daily Herald and Globe*, July 21, 1879.

colleges that the cadavers were obtained from distant cities, and of the city colleges that they got theirs from remote country districts, it is likely, that nearly all of this material was disinterred in the immediate neighborhood.<sup>36</sup> When rumors of grave robberies disturbed a community, editors, who generally were on the side of the local medical faculties, stated in their newspapers that such felonies had been committed for the benefit of some distant institution. More frequent than attacks by mobs were the visitations of the sheriff. But his searches were usually without result—either because he was in connivance with the authorities of the medical college and warned them in advance of an impending search, or because the college had clever ways of hiding the few cadavers illegally in their possession. Such a body when secured was rapidly dissected; diaries of students show that they worked continuously, even into the early hours of morning, and were excused from attending lectures until the dissection was completed, usually within a week. If there was danger of interruption, there were various devices of concealment. One such place was the cupola, an architectural feature of many early medical school buildings, not only ornamental but useful. By block and tackle several cadavers could be hoisted into the cupola through a trap door, whereupon the ladder by which this had been reached could be hidden between the partitions of the building. And sometimes only bold force could overcome imminent violence, as for instance at Cleveland, Ohio, in 1852, when the Medical Department of Western Reserve College, anticipating an attack by a mob which had wrecked and destroyed another medical school in the city, procured guns and ammunition from a neighboring armory. “The white-haired dean, musket in hand, stood on the front steps of the medical building with armed students behind him awaiting the mob which did not come when its scouts advised it of the preparation for its reception.”

After the Civil War, when railroads were extended, the shipment of cadavers from distant parts increased. Then many bodies of southern Negroes were used in northern medical schools, being shipped to them in barrels labeled as some commodity. A demonstrator, and later professor of Anatomy in a medical college in New England, described to Waite the arrangement he had, even as late as in the “eighties” and “nineties,” for procuring an adequate supply of bodies for his classes; “. . . he received twice in each session a shipment of twelve bodies of Southern Negroes. They came in barrels marked ‘turpentine’ and consigned to a local hardware store that dealt in painting materials.” These examples suffice to show how many a medical school, to meet the threat of extinction, was compelled to resort to various subterfuges and had to circumvent, too, the laws pertaining to the traffic in bodies.

<sup>36</sup> Waite, *ibid.*

For six years—from 1852 to 1858—there is no further mention in the "Transactions"<sup>37</sup> of the subject of legal dissections. In the meantime Dr. Cooper had gone to Paris, France, to pursue surgical study. Chance and circumstance shape a man's destiny, in this instance Cooper's. In the spring of 1850 he had contested ably with Dr. Joseph Warren Freer for the post of Demonstrator of Anatomy at Rush Medical College, a post which was considered one of high honor and distinction. Freer received by concourse this appointment and left a greatly disappointed competitor. Cooper, upon returning from France to this country, removed to the Pacific Coast. Here, he was to acquire wealth and wide reputation as a brilliant and accomplished surgeon. In 1888, his name was fittingly honored in that the most distinguished medical institution on the coast, the Medical Department of the Pacific, was rechristened Cooper Medical College. This college is now the School of Medicine of Leland Stanford University.

At the 8th annual meeting of the Illinois State Medical Society, held at Rockford in 1858, a resolution was offered and adopted that another committee be named "to mature a plan for memorializing the legislature in favor of legalizing dissections; and that said committee be requested to report during the present session of this Society if possible." President Hosmer A. Johnson appointed the following persons: Drs. C. N. Andrews, A. L. McArthur (both of Rockford) and C. Goodbrake (of Clinton) to serve in this capacity. Later at the same meeting, Dr. Andrews, the chairman, reported that the committee had not been able to formulate a plan in such a short time, and suggested that the committee be continued with instructions to draft a bill, as contemplated in the resolution.

In 1859, at the 9th annual session of the state medical society, held in Decatur, Dr. Johnson delivered his valedictory address on 'Human Dissection.' Rarely had an audience listened with such rapt attention as to this speech, for at its end Dr. S. T. Trowbridge (of Decatur) offered the following resolution, seconded by S. York, and adopted: "That the able and appropriate address of the retiring President, Professor H. A. Johnson, on Human Dissection, was a noble effort to place before the public in a bold and comprehensive manner an important subject, for which he has our sincere thanks," with the request that he furnish the address to the "Committee on Publication"; further, "that each member of this Society be requested to act as a special Committee to procure the publication in the local newspapers of such portions of said address as he may deem proper."

This resolution was fully merited for as one compares the Society's annual presidential orations throughout the period from 1850 to 1900, most

<sup>37</sup> The *Transactions of the Illinois State Medical Society* from 1850 to 1900 have been the writer's chief source in delineating the progress of anatomical legislation in Illinois during the second half of the 19th century.



of them, we may justifiably assume, expressive of the best efforts, the speech of Dr. Hosmer Johnson is unquestionably the most impassioned and masterly. With a broad grasp of medical history, a profound insight into the psychology of peoples, an incisive and impelling logic and an unsurpassed clarity of language, he portrayed the search after truth and perfection of skill, and the conditions that hamper such aims, in a manner which utterly annihilates any prejudice against human dissection. Though his speech must be read in its entirety to value it fully, a few short excerpts, taken at random, illustrate the force and beauty of his stirring prose. After saying that medical men are not moved by idle curiosity, and that no person has more reverence for the dead than they, he continued:

"It is no pleasure to them to brave the dangers connected with the procuring of the human subject,—to visit, we will suppose, in the silent hour of night, the dismal ghostly cemetery, and with their own hands exhume the body of a fellow mortal; and then night after night, for weeks perhaps, while others sleep, in some lonely room, by the light of the midnight taper, to unravel the thread of the mysterious fabric in which our spirit natures are enshrouded; and then, in addition to all this to know that over their heads is suspended the sword of legal justice, and that around them, at any moment the waves of popular fury may be rising that shall sweep them from the society, if not from the fair face of God's footstool itself. Let some sane man ask himself what motive could tempt him to such a task? What idle curiosity? or even what forms of beauty, or perfection of mechanism could move him to such pursuits? ..... No, if curiosity only were to be gratified, dissections would be few. .... Their studies of human anatomy, however, have been pursued with a higher aim than simply the accumulation of knowledge. .... We will not deny that human anatomy lends its aid to general science. It also enriches high art; but these are its secondary, and not its primary uses. .... On the subject of professional skill and qualifications our laws are most unjust. Why, in our own State, within the last few months, a jury of intelligent men rendered a verdict of fifteen thousand dollars against a man for treating in a bungling manner a very badly fractured arm. While, if he had made use of the means necessary to gain a knowledge of practical anatomy, without which no man can practice surgery and had been discovered in it, that same jury would have imposed upon him heavy penalties, and public sentiment would have deemed him guilty of high crime, and have associated him with felons and murderers. Nay, for just such an offense as this, men in our own State have been shot down like beasts, while others have been driven into exile. .... Thus, gentlemen, we have seen that through all the history of medicine, its usefulness has been in proportion to the zeal with which anatomy has been investigated. It is the *principle* of our science, the Heaven sculptured column on which stands the beauty and glory of our art. .... Death stands at your threshold ..... you await at the doorway the physician ..... when death comes to themselves or their families, they prefer the physician who spends his leisure hours in the dissecting-room rather than the drawing-room. ...."

No one deserves more credit in finally securing the passage of an "Anat-

omy Act" in Illinois than does Dr. Hosmer Johnson, not only because of this address but because of his succeeding, persistent efforts toward such legislation. It is to be noted that his motives sprang not from his preoccupation in any special or circumscribed field of medicine. Primarily he was neither an anatomist nor a surgeon. Because of his place in the history of Anatomy in Illinois, it is fitting to turn aside briefly to give the reader a glimpse of his life and personality. He was born in 1822, in Wales, New York, and died, at the age of 69, in Chicago, in 1891. His father was a farmer. At 12 years he moved with his parents to Michigan where he was so fully occupied in helping to develop the new farm that he could not attend school. He was taught by his mother. Farm work and, later, shoemaking provided the means for his future education. He attended the Academy at Romeo, Michigan, from 1844 to 1846, and then enrolled at the University of Michigan as a sophomore. In 1848, a pulmonary hemorrhage interrupted his studies, and he spent the following year at Vandalia, Illinois, and in St. Louis. Upon returning to college in 1849, he received the B. A. degree, and in 1850 entered Rush Medical College, from which he graduated two years later. During his medical course he formed a close friendship with William B. Herrick, the professor of Anatomy, and after graduation became associated with him in teaching and in editing the *North-western Medical and Surgical Journal*. In 1853 he was appointed lecturer in Physiology at Rush Medical College, two years later became Professor of Materia Medica, Therapeutics and Jurisprudence, and in 1857 was given the chair of Physiology and General Pathology. He relinquished this position in 1859, and with several other associates organized the Medical Department of Lind University, Johnson becoming its first president. The subsequent fate of this school is well known—its financial failure, the establishment of its medical department as an independent institution, the Chicago Medical College, in 1864, and its affiliation, in 1869, with Northwestern University. He remained president of its faculty until 1865, and held successively the professorships of Histology, General Pathology, Public Hygiene and Clinical Medicine. In that year he resigned because of failing health and visited Europe as an emeritus professor. On his return he was persuaded to lecture on diseases of the throat and chest, being associated with Dr. Nathan S. Davis who occupied the chair of Principles and Practice of Medicine. Dr. Johnson has been described by his colleagues as a man of nobility of character, of great learning, and an agreeable lecturer and kind teacher. He possessed good executive ability, bringing to his office wisdom and sound judgment. He was public-spirited and during the Chicago Fire of 1871 was one of the chief organizers of relief work in which he exhibited his attributes of gentleness, sympathy and devotion. His broad intellectual interests were shown in his participation in the founding

of the Chicago Academy of Sciences, Illinois Microscopical Society, Chicago Astronomical Society, Chicago Literary Club and the Chicago Historical Society, besides giving his service as an officer in other scientific and medical bodies.

At the same session of the State Medical Society in which Dr. Johnson delivered his oration, a third attempt was made to stimulate action in the problem of legalizing human dissection by naming a committee, this time composed of Nathan S. Davis, S. T. Trowbridge and S. York (chairman). In the following year (1860) its chairman reported verbally that the State Legislature had not met and that the committee should be continued to push further action. At the same meeting Dr. Nathan S. Davis gave an eloquent speech on "The Mutual Relations and Consequent Mutual Duties of the Medical Profession and the Community" in the course of which he, like Johnson, stressed the point that no real knowledge of anatomy can be gained without actual dissections, and made the plea for laws similar to those in New York and Massachusetts which assigned unclaimed bodies for that purpose. He informed all classes of the community to allow more freely and cheerfully not only dissections but also *post-mortem* examinations.

The Civil War years then seemed to have buried whatever progress had been made toward the legalization of human dissection, but in 1865 Nathan S. Davis, the indomitable protagonist of high standards in medical education, returned to its necessity and to post-mortem examinations in a paper "On the Nature of Medical Science and its Relation to the Community," read before the Bloomington meeting of the Society.

Two years later, at the meeting of the Society in Springfield, Dr. Hosmer A. Johnson offered the following resolution, which was adopted: "That the 'Committee on Legislation' be instructed to prepare and present to the next regular session of the State Legislature, a bill legalizing human dissections, and that each member of this Society be requested to urge upon our legislature the importance of such legal provisions as a protection to public and private cemeteries as well as for the promotion of medical and surgical education." In 1868, at the Quincy meeting, and again in 1870, at the Dixon meeting, this resolution substantially was reiterated by the majority of the "Committee on Legislation."

At this point it is pertinent to come back to the information of Dr. John F. Daggett's membership in the Illinois State Senate in 1871. He was elected to fill a vacancy caused by the death of Henry Snapp, representing the 18th district (composed of Will, Kankakee, Grundy and Kendall Counties), and took the oath of office Nov. 16, 1871. He served only this one partial term. In view of his tragic experience as a medical student, it would interest us to know what part he played in any proposed medical



legislation that was before the House. Accordingly I wrote to Harry E. Pratt, the State Historian at Springfield, to inquire if such information could be unearthed. At his request the archivist, Margaret C. Norton, of the Illinois State Historical Library looked into the records of the 27th General Assembly, 1871-72. She reported that Dr. Daggett introduced only one bill: No. 457, entitled "For an Act concerning the qualification and cause of challenge of jurors in criminal cases."<sup>38</sup> Two bills relating to medicine were introduced in the same session: Senate Bills 67 and 375, neither of which passed. The first of these (SB 67), entitled: An Act to promote the science of medicine and surgery" was referred to a special committee of which Senator Daggett was a member. This committee recommended that the bill be tabled, which was done. How much influence Dr. Daggett may have had in this matter the records do not indicate.<sup>39</sup> The

<sup>38</sup> Section I: Be it enacted by the people of the State of Illinois represented in the General Assembly . . . . . That it shall not be sufficient cause of challenge of a person otherwise duly qualified, called as a juror in a criminal case that such person has read or heard anything in regard to the facts or circumstances of the case, or formed or expressed an opinion in regard to the guilt or innocence of the accused, if it shall appear to the satisfaction of the court upon his examination under oath, that such person will truly and impartially try the case upon the evidence that shall be given to the jury; and a true verdict render, according to law, without being influenced or biased in his finding by anything which he may have read or heard or by his opinion previously formed or expressed.

<sup>39</sup> One of the remonstrances of the bill reads as follows:

#### REMONSTRANCE

TO the Honorable, the Senate and House of Representatives of the State of Illinois: The undersigned citizens of the State of Illinois observe with alarm that a Bill has been introduced before your Honorable Body, entitled:—"An Act to Protect the People of Illinois from Empiricism and Imposture in the Practice of Medicine and Surgery."

WE most respectfully, but urgently, remonstrate against the enactment of any such law, curtailing the natural rights and free exercise of private judgment of every citizen of the State of Illinois, in regard to the system of medical treatment that he or she will adopt for the restoration of impaired health, for the following among many other reasons that might be enumerated, viz:—

First, The most full and free exercise of conscience and private judgment in the treatment of disease, as well as in religious toleration, should not be infringed upon by legal enactments.

Second, There is no one system of medical practice which is not most emphatically condemned, as resting upon a false basis, and injurious to health, by other schools of practice, equally popular in the estimation of the most intelligent citizens of the State of Illinois, consequently there is no one or more well-known systems or bases of practice which the General Assembly can legislate in favor of, without doing violence to the sacred rights of private opinions and conscientious scruples of a large class of citizens.

Third, We remonstrate against legislation when a discrimination is made in behalf of popular schools that have the power of conferring Diplomas or granting certificates (as is too often the case) to individuals of no intrinsic worth, moral or intellectual but who are often a disgrace to society.

Fourth, Experience has demonstrated that all systems or schools of medicine which you are now asked to legislate in favor of, were, at some former period, held as wanting in all the essentials necessary for recognition as correct medical practice. What spirit

second Senate Bill, numbered 375, "An Act requiring physicians and surgeons practicing in this state to register, and prescribing penalties for violation of this Act" was also defeated in the Senate. The archivist has written to me further as follows: "We have compared the original bills for similar acts in the next few sessions with Daggett's handwriting and see

have the old schools ever manifested toward the founders of any new principle? Do the old schools examine the new systems, and render to the public an impartial verdict? No; the bitterest denunciations, and the most partial and violent criticisms, constantly emanate from the various distinguished professors. Thus was Harvey honored for his discovery of the circulation of the blood. Thus was treated Dr. Jenner, for introducing the system of vaccination for small-pox. Thus was Hahnemann anathematized for leaving old paths to explore and reveal the beauties and mysteries of Homeopathy.

If they have, by lapse of time and experience, become popular, and are now recognized as an improvement upon old systems, why may not new systems, with fair play and equal privileges, under a republican form of government, in this progressive age, in time become equally efficient, and capable of sustaining colleges and schools for public instruction, and take the place of the most popular practices of the present day? Why, then, fine and imprison the far-seeing men who are now laying the foundation for such improvements in the healing art? Why not allow the people in their sovereign rights to judge this matter, as well as in other matters of conscience? The Nazarene was accused and crucified, because, among other things, he healed the sick contrary to the practices of the regular schools and the laws of the Hebrews, and without asking a Diploma from the Scribes and Pharisees.

Almost nineteen hundred years have elapsed, and it is now proposed by the same class, the "Doctors," who were so anxious in those days "to protect the people from Empiricism and imposition," to do the same thing for the people of the State of Illinois, by the milder means of imprisonment, fine, and inability to collect pay for services!

We beg leave to suggest to your Honorable Body that the execution of such laws would be impracticable as well as unjust. While a practitioner in one locality would be sufficiently popular to obtain the necessary Diploma or certificate to save himself from fine and imprisonment, and yet, while in other localities the same individual could not, but would be amenable to all the penalties it is proposed that you shall prescribe. The wisest men the world has ever produced in the healing art, ever have and ever will protest against such legislation.

Dr. Benjamin Rush, who stood at the head of the profession in Philadelphia for many years, declared in one of his public lectures as follows: "I am incessantly led to make apology for the instability of the theory and practice of physic, and those physicians generally become the most prominent who have the most thoroughly emancipated themselves from the tyranny of the schools of physic. Dissections daily convince us of our ignorance of disease, and cause us to blush at our prescriptions. What mischief have we done, under the belief of false faces and false theories. We have assisted in multiplying diseases; we have done more—we have increased their mortality. The art of healing is like an unroofed temple, uncovered at the top and cracked at the foundation."

We could respectfully suggest to the legislators of the State of Illinois that it will be time enough to bring forward such a measure when men of the best judgment and highest attainments in the science and art of medicine will come to some understanding as to the principle or system by which the public will be treated when sick. At present the fact is patent, that the most eminent Doctors in the State are practicing on systems diametrically opposite, each believing and declaring that the others are killing their patients.

In view of the forgoing facts, together with thousands of others which will readily occur to the mind of each individual legislator, in regard to the injustice of such aggression upon individual rights, and the impracticability of executing any such law, we most respectfully protest against the enactment of any law upon the subject, and, as in duty bound, will ever remonstrate.

no similarity, which may or may not prove that he was not the author of one of them."

What attitude Dr. Daggett took in the consideration of the two bills mentioned, whether he played an active or a comparatively passive rôle, either in sponsoring them or in rejecting them is not clear at present and calls for further investigation. It is not unreasonable to assume that Daggett, remembering his own imprisonment and suffering because of unjust laws, chose not to be an aggressive spokesman knowing that his opponents might delve into and distort his past. Thus far my preliminary search shows that Dr. Daggett was able, because of the relative lack of distant communication in his day, to conceal the grave-robbing incident in Vermont. At any rate, the more than 80-year old Patrick A. Gleason, one time mayor of Lockport, who as a boy knew Dr. Daggett well and who, because of his Irish wit and sly humor, would have enjoyed adding to his store of anecdotes about "the thick-set bearded Doctor," did not know about it.<sup>40</sup> Nor had other persons, who were interviewed, heard about it.

Going back to the resolutions approved by the Illinois State Medical Society at the Quincy and Dixon meetings in 1868 and 1870 concerning a writ to legalize human dissection, apparently little further was done about them until 1874, when the General Assembly of the State passed another "Act to promote the Science of Medicine and Surgery" (approved February 16, 1874 and in force July 1, 1874). Under paragraph 1, headed:

"What Bodies may be delivered to Medical Schools for Dissection," we read that "It shall be lawful, in cities and counties whose population exceeds one hundred thousand inhabitants, for superintendents of penitentiaries, wardens of poor houses, coroners and city undertakers to deliver to the professors and teachers to receive the remains or body of any deceased person, for purposes of medical surgical study: Provided that said remains shall not have been regularly interred, and shall have not been desired for interment by any relatives or friends of said deceased, within forty-eight hours after death: Provided also that the remains of

<sup>40</sup> Upon arriving in Lockport to learn more about Dr. Daggett, I went directly to the City Hall believing that its files would give the best approach to my quest concerning the site of his office, residence, etc. A clerk told me that Patrick Gleason, a blacksmith by trade and formerly mayor (1913-1923), was thoroughly familiar with the history of the town. Taking me outside he pointed up the street to a small foundry and said that Gleason generally sat on a bench in front at this time of day—it was near noon—to swap stories with cronies. I found the bench empty and entered the shop to inquire about Mr. Gleason. There a kindly old man, presumably one of the workmen, told me that "Mr. Gleason is not here" and "did not come around as often as he should." I regretted this because I had heard that he knew more about Lockport and Dr. Daggett than anybody else. As I reached the door he laughed and said "I am Patrick Gleason." He insisted that I have dinner with him at the restaurant close by. There he regaled me with tales of various kinds. Later, he took me to a large farm 4 miles east of Lockport to meet his friend, Henry Burch, a pioneer settler from New England, who was a man of go and quite as spry and jolly as Patrick and who, too, had known Dr. Daggett closely.



no person, who may be known to have relatives or friends shall be so delivered or received without the written consent of such relatives or friends: And, provided, further, that the remains of no one detained for debt, or as a witness, or on suspicion of crime, or of a traveler, or of any person who shall have expressed a desire, in his or her last sickness, that his or her body may be interred, shall be delivered or received as aforesaid, but shall be buried in the usual manner; And, provided, also that in case the remains of any person so delivered or received shall be subsequently claimed by any surviving relative or friend for interment: Provided further, that notice shall be given to friends or relatives of any deceased person, if such friends or relatives are known to the authorities."

Paragraph 2 specifies that after the bodies have been used by said professors and teachers, the remains must be buried in a public cemetery. Paragraph 3 states that the bodies can be used for medical and surgical study only, and paragraph 4 prescribes the penalties for contravention of the provisions of the law.

Thus, after 25 years of agitation by the organized medical profession of the state, an "anatomical law"—even though inadequate and defective, because it was not mandatory—had come into being. The uninitiated person may attribute this lag of time to lack of energy or effort on the part of its sponsors, for he little realizes the tedious amount of propaganda that is necessary to overcome the inertia and the obstacles, real or fancied, before the conditions are ripe or the constellation of circumstances are favorable for the people's representatives to take action toward legislation.<sup>41</sup>

That the General Assembly was greatly divided in its opinion about the necessity of an "Anatomy Act" and was loathe to make a positive decision towards a satisfactory solution of the problem is indicated in the discussion which followed when Dr. Albert B. Strong, at the meeting of the Illinois State Medical Society in 1884 at Chicago, proposed an amendment to the "Anatomy Act." To reinforce his proposal, Dr. Strong gave the following explanations: "... all of the medical colleges of this city, through an association of their demonstrators" (Demonstrators of Anatomy) "have mailed to every physician of Illinois during the past few days the draft of a bill, which will be presented to the next Legislative Assembly of the State, intended as an amendment to the present law, entitled "An Act to Promote the Science of Medicine and Surgery in the State of Illinois." Accompanying that draft is a personal letter directed by name to every physician in

<sup>41</sup> The writer was confronted with this truth in 1936 when he had enlisted the cooperation of foremost anatomists in Chicago to seek legislation making obligatory the post-mortem examination of executed criminals immediately after death. One of the motives underlying the aim was to provide the means of obtaining fresh, normal human tissues and organs, not changed by disease or decomposition, for immediate fixation and processing toward the preparation of histological specimens for study. We were directed to make our plea to the Governor's Committee preliminary to any step toward inaugurating such a bill. The chairman of this committee, at that time a leading psychiatrist in the state, flatly refused to consider our petition, advising us to "let sleeping dogs lie."

the State, asking his personal influence with his representatives and senators for the bill. It may not be unknown to most of you, that there has been in this city during the past winter for the first time in ten years, much trouble to procure a sufficient amount of anatomical material. There need not have been any trouble whatever, had not the governing board of the county discovered that the law was not mandatory. The only remedy is in additional legislation . . . 1) to make the law mandatory, and 2) to make preceptors, as well as medical colleges, recipients of its benefits, so that teachers in private may have material enough to illustrate their teaching. During the past winter there has been no scarcity of dead paupers in this city. Indeed, the supply from institutions of Chicago supported by public taxation has greatly exceeded the demands of Science." Dr. Strong then urged all members of the Society to exert their utmost influence and persuasion upon the legislators to support the bill and to guarantee its passage.

In the debate of Dr. Strong's proposal in which prominent members of the Society participated, Dr. Hosmer Johnson made another dramatic appeal. We will quote his remarks at length here first, because they were made from the floor spontaneously and extemporaneously and display his persuasive rhetorical ability; and secondly, which is more important historically, because they give us a glimpse of the obstacles which the original law (1874) faced before it was finally ratified.

"..... It is possible that some of the members of the meeting are not quite aware of the history of the first legislation. The bill as first passed was something of a concession. The bill, as first proposed and brought before the country and members of the legislature, was mandatory. We were obliged to accept the provision making it lawful for the authorities at hospitals to deliver bodies. It was only by such concessions that the enactment was reached leaving the hospitals and other institutions to arrange delivery to suit their convenience. The final argument that secured the passage of the bill was this: That it was the means, and the only means, by which the cemeteries, vaults and mausoleums generally, throughout the land, could be protected from that class of men who stand between medical institutions and some other institutions; who must make a business of it. Such business naturally falls in the hands of those who have little delicacy in the matter—the lower classes of the community, void of all sensibility. It necessarily falls to the hands of such men, in the absence of any legal enactments, to secure for colleges sufficient anatomical material. We urged that this bill was the only way now at our command to protect the cemetery from the rogues and robbers who have no character, nothing to lose,—no interest except in what the colleges pay for such material. The legislators should say to the people; We are making laws to protect your cemeteries. The greatest boon conferred upon Society is in delivering unclaimed bodies, for anatomical studies,—saving those whom your fondest memories claim."

"Under such a stress they passed the bill. That was something; that made the starting-point, made it legal for hospitals and other institutions to deliver the

bodies to the colleges. There was one feature that influenced the bill,—that it excepted cities having twenty-five thousand. It was finally passed so that Chicago would be the only city having the benefit of the bill."

"Two things should be done to secure the passage of the present bill,—the arguments first used should be used again, and be used forcibly. We should say to the people of Illinois: The demands of humanity must be met,—must be met by means through which physicians become acquainted with the human body. Anatomical study should go on. If it can go on legally, well and good; if not, it will nevertheless, go on. These are facts which no legislation could or should suppress. The demands of humanity should control our action on this whole subject. Let us keep around us our children whose sunshiny, joyous lives make our own lives so precious. Let us have, since it must be so, the means by which our medical advisers shall be more competent to save from suffering, and prolong life."

"Let it be understood that our legislators aid us by the enactment of a bill legalizing human dissection. But let the mutilation of the earthly tenement be restricted to those who have no friends to be wounded by leaving their bodies to medical colleges. Let us see to it that this class furnish absolute protection to all the villages throughout the country. Let the people who with worrying hearts, and eyes suffused with tears, follow their dead to cemeteries, and cover them over with flowers, know that no rude hands shall desecrate that sacred spot. They can secure this only in one way,—by supplying the means for medical study. They can secure it in no other way but by legalizing methods to procure anatomical material. These two facts should be brought to the notice of the legislators. In our efforts to get a bill through the first time, we met with more objections, finally failed, and the matter went on two or three years after our last attempt. It was found that a graveyard had been robbed and the bodies had been brought to this city. The newspapers spoke of the medical colleges as ghouls. This early resurrection was held to be a violation not only of the rights of the living, but of the sanctity of the grave. They represented the doctors as revelling in this tearing to pieces of the beautiful structure God had given this temple of life. I replied very briefly to the statements and attacks made upon the profession, and that led to another attack. Their onslaught was but the echo of public sentiment. They finally admitted that dissection was a human necessity,—conceded that no man who had learned his anatomy from charts and models alone should perform any important operation, but asked why doctors did not propose a law providing for this public need. I then showed them that a measure intended to meet the difficulty had three times previously failed in the legislature. It was quite a surprise to them that such a law had been discussed, and three times failed to pass. The outlook being favorable, we went to work and brought the bill up again with such concessions that made it admissible, and not mandatory, for hospitals and other charitable institutions to deliver the bodies of the pauper dead to the colleges. The law was passed. To secure a body now, it must be bought, and that at a very high price. If I were demonstrator of anatomy, I should say to the Board of Commissioners, your charge is too high; we can get bodies at a lower price. You can come down, or your market is gone (Applause). What we want especially is delivery, upon demand, to medical colleges of the bodies of such paupers as have not friends to take care of them, and a sufficient number of them to meet the reasonable demands of medical study." (Long and continued applause.)



Supported by Dr. Johnson's fervent appeal, Dr. Strong's leadership achieved the passage of the new 'anatomy law,' which was approved June 26, 1885, and is in force to the present time. The available biographical data about Dr. Albert B. Strong are rather scant. He was born in Galesburg, Illinois, in 1845, and he died in March, 1900. He attended Rush Medical College, graduated from it in 1872, served during his senior year as an interne at St. Luke's Hospital in Chicago, and then followed it with an internship at Cook County Hospital from July 1872 until February 1874. From March of that year until October of the following he lectured on *Materia Medica* and Therapeutics in Rush Medical College. He was then elected demonstrator of Anatomy and lecturer in this subject in the spring course of that institution, which position he held during ten years. It was during this period that he agitated vigorously for the amendment of the existing anatomical laws. In 1885, at the Springfield meeting of the Illinois State Medical Society, he refers to the "magnificent way in which the Society has supported these efforts." At that time there were 8000 doctors, including dentists, in the state. Six thousand communications stressing the need of additional legislation for anatomical purposes were sent out from the office of the demonstrators' association in Chicago, and five thousand individual letters were received in response. Only two letters said they would oppose the measure.

Hon. T. A. Sheffield of Jo Daviess County introduced the new measure to the State Legislature as Bill 133, which pertained to the use of bodies of deceased persons to promote medical science. It read:

"Be it enacted by the People of the State of Illinois, represented in the General Assembly: That superintendents of penitentiaries, houses of correction and bridewells, wardens of hospitals, insane asylums and poorhouses, coroners, sheriffs, jailors, city and county undertakers and all other state, county, town and city officers, in whose custody the body of any deceased person, required to be buried at public expense, shall be, shall give permission to any physician or surgeon (a licentiate of the State board of health), or to any medical college or school, public or private, of any city, town or county, upon his or their request therefor to receive and remove free of charge or expense, after having given proper notice to relatives or guardians of the deceased, the bodies of such deceased persons to be buried at public expense, to be by him or them used within the state, for advancement of medical science; preference being given to medical colleges and schools, etc. . . . . said bodies to be distributed to and among the same equitably; the number assigned to each, being in proportion to the students of each college or school."

To prohibit the traffic of unclaimed bodies and to insure that they would be used only for the purpose stipulated, namely the promotion of medical science, a sufficient bond was to be deposited by individuals, schools or organizations using such bodies for dissection. After stating the penalties

imposed for refusing to deliver dead bodies, there was a paragraph stating the procedure by which the remains of such bodies after dissection be disposed of. It said that

"it shall be the duty of preceptors, professors and teachers, and all officers of medical colleges or schools, public or private, who shall receive any dead body or bodies, in pursuance of the provisions of this act, decently to bury, in some public cemetery, or to cremate the same in a furnace properly constructed for the purpose, the remains of all bodies, after they shall have answered the purposes of study aforesaid." The penalty for not complying with these regulations shall be "not less than 50 dollars, imprisonment in the county jail, not less than six, nor more than twelve months, or both, at the discretion of the court."

It is difficult to arrive at a correct appraisal of how many human bodies were generally available annually for dissection in Illinois before the passage of the Anatomy Act of 1885, that is, how much was illegally procured or imported and how much was sanctioned by the law, especially by that of 1874. Conflicting estimates are apparent in the acrimonious dispute which followed immediately on a report on medical education and preliminary education at the Springfield meeting of the Illinois State Medical Society in 1885 in which Dr. Albert Strong told about the progress in securing additional legislation for anatomical purposes. In reply to Dr. (William Heath) Byford who said that "we graduate a large number of persons not half of whom have dissected," Dr. (Charles Warrington) Earle begs the president to permit him to say "just one word in defense of the medical colleges of Chicago. . . . I desire to make this statement that of 500 men and women who are graduated each year from the Chicago Colleges—from Rush, the Chicago Medical, the College of Physicians and Surgeons and the Woman's College—490 have dissected two parts, if not the entire body." Dr. Byford retorts: "I stick to my opinion all the same." Prof. Earle: "And yet the facts are against you, Doctor. Every college in Chicago is very particular that its students shall do the required dissections." Dr. Remsbury: "I would like to ask Dr. Earle how much dissection is required? Prof. Earle: "In the college with which I am connected—the Woman's College—we require the dissection of the entire body." Dr. Remsbury: "If they all get so much dissection why is it we need this Anatomical bill?" Prof. Earle: "We have material enough for that and a few more."

It is not strange that the provisions of the Anatomy Act even after its passage did not escape entirely the petty political maneuverings and bribery of unscrupulous officials. There is a sentence in Dr. Cook's response to Dr. A. Reeves Jackson's welcome of the Illinois State Medical Society to the city of Chicago in 1887 for its 37th meeting which, though it refers to another aspect of medical education, might quite as well point to the interference in the fair application of the anatomical law: "Do not permit

any more medical college enterprises to spring up in your midst, until at least you are sure your best clinical material is not under the control of the political ward bummer, who, under your gentle form of government, has reached the goal of his ambition, and is placed where he can decide what is best for medical educators to do."

Paraphrasing the dictum that "eternal vigilance is the price of freedom," the guardians in the demonstrators' association—such men as Dr. Albert B. Strong—have maintained the effectiveness by and large of the Anatomy Law since its signature. In the presidential address of Dr. E. Fletcher Ingals at the session of the state medical society in 1893, there is reference to the failure of needed measures in medical education which could have been attained if a different course had been pursued; alluding to the comparatively prompt passage of the Anatomy Act which was accomplished several years ago by a few energetic men working in a systematic way, he remarked: "I am informed that in securing the bill just referred to, the Committee sent out 87,000 pieces of paper including envelopes and enclosures, probably amounting to 35,000 letters, by which the support of four-fifths of the physicians in the State was obtained, and through them practically all of the legislature. Yet even then, and although the bill finally went through with an overwhelming majority, it would have been pigeon-holed and lost, had not Dr. Strong been on hand at the closing of the session to see that it was brought to third reading."

Though the "Anatomy Act" of 1885 in Illinois assured an adequate supply of material for dissection and teaching, "body-snatching" did happen sporadically even after that time to satisfy some doctor's scientific curiosity. He may not have been fully familiar with the clauses of the law or, in his immediate pursuit, did not care to be bothered with possible "red tape" or with the deposit of a sufficient bond as demanded by the law. Reference will be made here briefly to one such episode which occurred in the "nineties" and which was detailed to me verbally and vouched for by an officer of the Ogle County Medical Society. Because of its occurrence not so long past—only 60 years ago, the names mentioned in my notebook are withheld. A good-for-nothing young man, arrested for rape, had been incarcerated for a prolonged period in the county jail at Oregon to await trial. To contract illness and thereby, perhaps, receive a more lenient sentence, he consumed great quantities of scrapings from a lead pipe. This circumstance was discovered at the time of his death not long after. Evidently there was no one who cared to claim the body, and it was buried in the potter's ground. That night a young dentist and two physicians who shared the same offices and who were curious how the lead affected the tissues, dug up the body and conveyed it to their barn for dissection. After a few days the stench of decomposition became offensive, might arouse



suspicion, and made urgent the disposal of the body. The dentist, wishing to examine the teeth further, decapitated it and then at night transported the corpse in his spring-wagon to the Rock River where it was dumped from a bridge. Several days later the headless and much mutilated body was found washed ashore at Grand Detour. The 'crime' was never solved by the county authorities, and the perpetrators chuckled. To this day, the skull, sphinxlike, graces the inner sanctum of the dentist's successor's office.

Not only in Illinois, but in other states of the Union witnesses are still to be found who have first hand knowledge of 'body-snatching' for Anatomy which occurred here and there at the turn of the century. A doctor, known to the writer, vouched for the information that his teacher had participated in such a grave-robbing in New York as late as 1898. Waite, too, presents evidence of sporadic incidents of this kind in the 'nineties.' But by the end of the 19th century most states had enacted more or less satisfactory "Anatomy Laws," canceling the need of grave-robbing and thus bringing to a close this most lurid chapter in medical history.

If the public mind has associated "grave-robbing" only with the medical profession, it had overlooked that in many instances during the centuries such desecration sprang from entirely different motives. That thieves emptied the royal tombs of Ancient Egypt because of the treasures buried with the Pharaohs, or that, in more modern times, bodies of prominent persons were stolen from their sepulchres and were held for ransom hardly needs mention. The incident is well known how on the night of November 7, 1876, criminals almost succeeded in stealing Abraham Lincoln's remains from the sarcophagus in the catacomb room at the base of the then unfinished monument at Springfield; how secret service men and detectives, who heard rumors of the plot beforehand and consequently were in hiding nearby, foiled them.

Exactly two years later the body of Alexander T. Stewart, the merchant whose great store in New York became Wanamaker's, and whose fortune was worth \$30,000,000 when he died, was stolen from the churchyard of St. Mark's in the Bouwerie. The ghoul wanted \$200,000, the same sum that was to be paid for the return of Lincoln's body. After prolonged negotiations, he finally accepted an offer of \$20,000. After further bargaining a masked man on horseback met a relative of the Stewart family in a remote spot in Westchester County at 3 o'clock in the morning and escorted him to a buggy occupied by another masked man. The latter presented as identifying evidence the exact piece of velvet from Stewart's coffin that had served in the original ransom note. He counted the contents of the bag of ransom money and "then turned over to the relative a canvas sack containing the remains of Alexander T. Stewart."<sup>42</sup>

<sup>42</sup> Charles Collins, in *Chicago Sunday Tribune*, March 22, 1953.

When the millionaire George M. Pullman, inventor and builder of railway cars that bear his name, died he left "extraordinary precautions against disturbance of his grave. His coffin was wrapped in tarpaper and then completely covered and sealed with a coating of asphalt an inch thick. It was lowered into an underground vault of massive concrete, reinforced with steel bars. This chamber was then poured full of concrete and covered with bolted railroad rails. The process formed a solid block of concrete and metal, immovable except by heavy machinery, indestructible except by prodigious charges of dynamite." Thus, Pullman met the age-old fear of grave-robbers, a fear that began to haunt him when he heard as a boy the tales of ghouls digging up bodies and purveying them to the dissecting rooms of medical schools, and that seized and took overpowering possession of him when the desecration of the graves of Lincoln and of Stewart were publicized. In 1901, when the body of Abraham Lincoln was placed in its final resting place in a vault beneath the monument in the cemetery at Springfield, the order which the son, Robert T. Lincoln, then president of the Pullman Company, gave for the preparation of the tomb was implicitly obeyed: "Bury him now and for all time exactly the way Mr. Pullman was buried in Chicago." <sup>43</sup>

<sup>43</sup> Collins, *ibid.*

## CHAPTER XX

# PHYSIOLOGY

By CARLOS I. REED, A.B., A.M., PH.D.\*

THE history of physiology in Illinois before 1900 is neither dramatic nor impressive. One reason for this is that the state had never sheltered a William Beaumont, as had the three adjoining states. There were Professors of Physiology in the early proprietary schools, but most of them were only secondarily interested in the subject. Many gave primary attention to courses in anatomy, inserting only a few lectures on function.

The first of these professors was George W. Richards† (1800-53), who was graduated from the College of Physicians and Surgeons of Fairfield, New York, in 1828. He practiced medicine in central New York until 1841, when he moved to St. Charles, Illinois, which then was a more promising metropolis even than Chicago. Like many frontier physicians of that period, Richards was fired with an ambition to be the central figure in a medical school and, since there were no medical schools nearby, perforce one must be established and he was the man for the job. Richards' personality and reputation greatly facilitated these objectives.

This first school was the Franklin Medical College of Illinois. (It does not appear that a charter was ever issued to it in Illinois.) Richards was Professor of Anatomy and Physiology during the seven years of the life of the school. There are no records extant of any of its graduates, and it evidently functioned merely as a center of practical training, chiefly in anatomy and related subjects. The school was closed because of an armed mob bent on the recovery of a body recently removed from a new grave in Sycamore, Illinois. Whether the body was actually brought to the school was never determined. In the course of the riot, a rifle shot was fired through the locked door of Richards' home, fatally wounding a student and seriously wounding Dr. Richards. This unfortunate incident terminated the first known attempt to institute formal medical education, including physiology, in the State of Illinois.

After the termination of this venture, Richards immediately became in-

\* Dr. Reed has been Professor of Physiology at the University of Illinois College of Medicine for many years. At present he is writing a history of physiology of the United States. His field has been mainly the application of physics to biologic problems.—*Editor*

† For a more detailed biography of Dr. Richards, written from a different approach, the reader is referred to Volume I of this series, p. 543.—*Editor*



volved in another project, known at first as the Rock Island Medical College, and later by the pretentious title of The College of Physicians and Surgeons of the Upper Mississippi. It existed only two years and is an example of the extremely low level on which a group of otherwise reputable physicians could at that time conduct a medical school. In this instance, a charter granted to a group of physicians in Madison, Wisconsin, provided for the establishment of a medical school in that city. This instrument carried a further provision for a branch school with no statement as to its location. Two of its promoters were George W. Richards and Moses L. Knapp. It was apparent later that these men never intended to operate a school in Wisconsin, but were taking advantage of the less stringent laws in that state to evade the then more stringent requirements in Illinois. Rock Island was selected as a suitable location for the branch, but again the problem of anatomical materials arose and, after one session, the school was moved to Davenport, Iowa. S. G. Armor, who played a rôle in the medical history of Cincinnati, was Professor of Physiology, Pathology and Medical Jurisprudence, and Chandler B. Chapman was Professor of Anatomy. In 1850, the school was moved to Keokuk, Iowa. Both of these schools were proprietary in the sense that the faculty and Board of Trustees were composed of the same individuals.

#### PHYSIOLOGY AT RUSH MEDICAL COLLEGE

As early as 1840, Daniel Brainard was giving private instruction in anatomy and physiology. Prior to that date he had secured a charter for a new medical school in Chicago. Nowhere in the records of that time was there any provision made for instruction in physiology. During his stay in St. Louis where he had been associated with St. Louis University, Brainard had met James Van Zandt Blaney, then stationed at Jefferson Barracks, and persuaded him to come to Chicago as Professor of Chemistry and Materia Medica. Blaney had received the Baccalaureate at Princeton in 1838, then undertook special work in chemistry with Joseph Henry, and in 1842, received the medical degree from Pennsylvania. Blaney was a popular teacher and a successful practitioner. His attainments in the chemical field, in addition to other duties, led to his appointment, in 1857, as Professor of Chemistry and Natural Philosophy at Northwestern University. In 1844, he established the *Illinois Medical and Surgical Journal*. After Brainard's death in 1866, Blaney became President of the Faculty of Rush Medical College. He published a number of texts, *among them one on physiology*, which implies that he probably had taught physiology for some time. His activities in various civic fields were legion.

The first session of Rush Medical College opened in 1843 with Brainard himself in charge of anatomy, physiology and surgery. After the first year,

he retained only surgery and W. B. Herrick was appointed Professor of Anatomy and Physiology. Herrick was graduated in medicine from Dartmouth in 1836. The following year he became Demonstrator in Anatomy in the Louisville Medical Institute but after two years moved into Illinois where, in 1844, he was appointed Professor of Surgery in the Illinois College at Jacksonville. However, before he could assume his duties there, he was called to Rush. Later he served for a time in the Mexican campaign. By the time ill health compelled him to return to Chicago, Dr. Armor was Professor of Physiology and Pathology at Rush, so Herrick confined his attention exclusively to anatomy.

In 1849, Nathan Smith Davis was appointed Professor of Physiology and Pathology at Rush. After receiving his medical training at Fairfield in 1834, he practiced medicine in various localities in New York until 1847, when he went to the College of Physicians and Surgeons in New York City as Demonstrator in Anatomy. He also lectured on medical jurisprudence, and edited *The Annalist*, a local journal. After one year in Rush, Davis was transferred to Medical Practice, in which capacity he continued until 1859 when he, with others, withdrew from the Rush faculty and formed the Medical Department of Lind University, the ancestor of the present Northwestern University Medical School. Davis was a vigorous advocate of reform in medical education and practice. Despite his active attention to a clinical career, he always maintained his interest in physiology. This is clearly revealed in his graduation thesis on "Animal Temperatures" in which he attacked the theory, then still current, that body heat resulted from the union of oxygen and carbon dioxide in the lungs, and also summarized existing evidence of the origin of heat in the tissues. Of his 136 publications, thirty-one may be considered as original contributions to physiology, as well as representative of the general quality and range of his interests. In addition, he wrote extensively on various aspects of medical education and history.

There is some confusion about Davis's successor, since complete files of early catalogs are not available. According to Bridge and Rhodes, Abisha A. Hudson succeeded to the Chair of Physiology. Hudson was practicing medicine at the time in Sterling, Illinois, but, so far as can be learned now, his academic career was confined to the Professorship of Materia Medica and Therapeutics in the school in Davenport and later in Keokuk, Iowa. His name does not appear in that capacity in any *available* number of the annual catalog of Rush Medical College for that period; nor did Dr. Weaver in his history of Rush give any information on this point.

From the catalogs it appears that Herrick resumed teaching physiology and, at times, also pathology; he was made Emeritus Professor in 1857. Joseph Warren Freer, who became Demonstrator in Anatomy in 1852, had

apprenticed under Brainard and was graduated from Rush in 1848. He became Professor of Anatomy in 1855, which implies that Herrick must have taught physiology until his retirement, at which time Hosmer A. Johnson was made Professor of Physiology and Pathology. According to Weaver, Freer left Chicago in 1871 but the catalogs listed him through 1877. It is not known how long Dr. Johnson functioned, but the catalog in 1868 listed Freer again as Professor of Physiology and Microscopic Anatomy.

In 1875, F. L. Wadsworth was made Adjunct Professor of Physiology and Microscopic Anatomy, and was listed in the Rush catalog through 1882.

Henry M. Lyman received the medical degree from Columbia in 1861. Ten years later he was named Professor of Chemistry in Rush Medical College, but in 1878 his title was changed to Professor of Physiology and Nervous Diseases. In 1891 he confined his work to medicine entirely. After Wadsworth left, E. S. Talbot was listed as Lecturer on Dental Anatomy and Physiology, and the following year Edward P. Davis appeared as Lecturer on Physiology and Histology. In 1886, the name of Albert J. Ochsner was added, and the following year Davis's name was omitted. Lyman, Talbot and Ochsner worked through the session of 1887; then Talbot dropped out, and the name of Harold N. Moyer appeared instead.

After Lyman was transferred to Medicine, John M. Dodson succeeded to the title of Professor of Physiology with William A. Locy and Archibald Freer as staff members. Although Rush affiliated with the University of Chicago in 1897, the catalogs carried Dodson's name until 1901 when Jacques Loeb, for several years previously in charge of physiology at the University, was listed in the Rush announcements as Professor of Physiology.

All of the physiologists up to the time of Loeb gave purely didactic instruction with little attempt even to demonstrate physiologic principles. Assistants or adjunct professors gave only instruction of microscopy in the laboratory.

From the Rush catalog for 1896, the following examination questions were taken; from them, one can obtain a fairly good idea of the scope and point of view prevailing, not only in Rush but in most of the schools of that period. The questions reveal not only the elementary level of information imparted, but also the methods of instruction and evaluation.

#### QUESTIONS FOR EXAMINATION OF FRESHMEN IN PHYSIOLOGY

1. Describe the gross and microscopic structure of voluntary muscle.
2. Name the inorganic proximate principle of the human body, and state where each of the chief ones is most abundant.
3. Describe fully the red corpuscle.
4. Describe the sounds due to the heart action, the causes of each, and name the events in the cardiac cycle accompanying each.



5. What are the chyme, trypsin, amylotin, peptone, cholesterine?
6. (a) What is a ferment? (b) What is an organized and an unorganized ferment?  
(c) What ferments are present in the human body?
7. (a) What are the forces concerned in absorption? (b) In what ways do lymphatic vessels terminate?
8. Describe a kidney tubule.
9. (a) Show by diagram the curve produced in the myogram by a single muscle twitch produced by an instantaneous electrical stimulus. (b) What phenomena accompany such a muscular contraction?

#### QUESTIONS FOR EXAMINATION OF SOPHOMORES IN PHYSIOLOGY

1. What muscles abduct, adduct, render tense, relax the vocal cords?
2. (a) Define a reflex act. (b) What are Pflüger's rules showing the relation of a reflex action to the strength of stimulus? (c) What reflex centers are resident in the medulla oblongata?
3. (a) By what methods are we able to differentiate the conducting paths in the spinal cord? (b) Name the column of white fibers as distinguished by these methods.
4. Describe the internal capsule, and name the tracts of conducting fibers found within it.
5. Write out a chart of the fourth cranial nerve.
6. In what portion of the cerebral cortex of the monkey are situated the centers for: (a) motion of the left hind foot, (b) motion of the muscles concerned in speech, (c) supination and flexion of the left forearm, (d) of the right forearm.
7. What in general are the probable functions of the sympathetic nervous system?
8. A. Define (a) common, (b) special sense.  
B. Name all of the special sense impressions.  
C. Where is the tactile sense most acute and how measure?
9. (a) Describe the semicircular canals of the internal ear. (b) What is believed to be their principal functions?
10. What part of the refracting media of the eye moves in accommodation, and how may we demonstrate that it alone moves?

#### PHYSIOLOGY AT NORTHWESTERN UNIVERSITY MEDICAL SCHOOL

The faculty members who withdrew from Rush Medical College in 1859, including Nathan S. Davis and Hosmer A. Johnson, all were interested in the improvement of medical education, including physiology. At that time Lind University had just obtained a charter to operate a College of Liberal Arts in Chicago. The initial step accomplished, the trustees at once began to expand their ambitions. Departments of Theology and of Medicine were envisioned. This suggestion was of great interest to the group seceding from Rush. Starting from nothing, they were free to organize graded courses of instruction in thirteen departments, instead of the conventional six or seven.

Hosmer A. Johnson was graduated from Rush Medical College in 1852,

and had taught *materia medica* and physiology at that institution at different times. He was named the first Professor of Physiology and Histology in Lind University; however, before the first session opened, he was transferred to *materia medica* and therapeutics. The first *active* Professor of Physiology, therefore, was John H. Hollister, who was graduated from Berkshire Medical Institute in 1847 and practiced medicine in Grand Rapids, Michigan, until 1855. After one year, Hollister took over anatomy and Johnson returned to physiology until 1865 when he became Professor of Pathology and Hollister again took up physiology. The following year Johnson resigned because of ill health, and Hollister succeeded to the Chair of Pathology. Apparently physiology was "farmed out" for a few years, but in 1868, Daniel T. Nelson, who had been graduated from Harvard Medical School in 1865, was appointed Professor of Physiology and Histology, in which capacity he served for eleven years.

Henry Gradle, a Rush alumnus of the class of 1874, after several years of study abroad—not in physiology but in ophthalmology—was named Professor of Physiology in 1879 and remained five years. During the following four years, R. W. Bishop filled the Chair. He had received the baccalaureate from the University of Vermont in 1877, went to Berlin where he was graduated in medicine in 1882, and later went into dermatology. Next came George W. Webster, a Rush alumnus of the class of 1882. He went into general practice but when Bishop retired, in 1888, Webster succeeded to the title of Professor of Physiology. Later physical diagnosis was added to his duties, and after 1895 he was Professor of Clinical Medicine. He was President of the Illinois State Board of Health from 1900 to 1914.

Winfield Scott Hall was graduated from Northwestern University in 1887 and completed the medical course the following year. For four years he was Head of the Department of Biology in Haverford College. He then went abroad for study in Leipzig where he completed medical training for another degree in 1894 and the Doctor of Philosophy in 1895. Upon returning home, he was made Professor of Physiology at Northwestern University to succeed Webster. (He retired in 1919.) He also lectured in the Schools of Nursing in both Wesley and Mercy Hospitals and in the Y.M.C.A. College. Hall devoted his early efforts to equipping the physiologic laboratory along more modern lines and to research on growth, chemical metabolism, nutrition, alcoholism, gonadal endocrinology and related subjects. He was a large man, black-bearded, of rather stern mien and somewhat of a zealot on the moral aspects of science, but he possessed an impressive personality. He was one of the first male lecturers on sex hygiene in this country and was Director of the Bureau of Social Hygiene. Despite the promising outset of his career, Hall made little impression on

physiology in his later years, and apparently made little effort to keep the laboratory equipped in line with modern progress.

#### PHYSIOLOGY AT THE COLLEGE OF PHYSICIANS AND SURGEONS IN CHICAGO

In and around Chicago in the middle eighties, there were in operation some twelve institutions called medical colleges. That many of them were cult schools did not alter the fact that they drew patronage from the city and state and sapped resources in finances and clinical facilities. Out of this meleé there arose in 1882 a strictly proprietary institution known as the College of Physicians and Surgeons of Chicago.

The first Professor of Physiology in this new college was E. E. Holroyd, a graduate of Keokuk College of Physicians and Surgeons in 1878. There is no indication that he was particularly qualified for the position, except that he was a stockholder in the corporation. Apparently unable to qualify for the more important clinical positions, he was given the job of teaching physiology. His name does not appear in any professional directory of the period. The first bulletin carried the following statement about physiology: "Lectures, demonstrations, recitations and practical work in the laboratory during the first year. Students will have opportunities for pursuing original investigations." The condensed weekly class schedule printed in the bulletin gave no indication of a laboratory period, nor was there any description of a physiologic laboratory, although those for anatomy and chemistry were elaborately described. The bulletin further recommended as texts those of Foster and Carpenter, both English authors. A little later, however, those of Dalton and Draper were added. In the bulletins for the two year period of Holroyd's service, no course in physiology was even listed. Whether it was not given at all or was not considered of sufficient importance to merit printing space is not apparent. From 1887 to July 10, 1905, Holroyd's record is blank. On the latter date he committed suicide in Milwood, Illinois, where he had been practicing medicine. To accomplish his objective, he employed arsenic, carbolic acid and strychnine!

John A. Benson was graduated in medicine from Columbia in 1880. Shortly afterward he came to Chicago and soon became Superintendent of the Dunning State Hospital. In spite of the fact that his special field was neurology, he was appointed Professor of Physiology to succeed Holroyd. Later his title included Histology also. The course consisted of five lectures a week from 5 to 6 P.M. Each year the catalog carried the announcement of a gold medal offered by Benson to the student making the best grade in physiology. Only once, in 1892, was the name of the winner made public: U. G. Wendell. For a time the lectures were reduced from five to three times each week.

In 1891 S. B. Buckmaster, a graduate of the University of Virginia in



1879, was named Adjunct Professor, his duties being mainly concerned with histology. The lectures were further reduced to two a week with six hours of laboratory work. Evidently all the time was devoted to histology because the laboratory period disappeared when histology was divorced again from physiology. The five lecture periods were then restored. In 1895 Buckmaster resigned and some time later went into practice in Janesville, Wisconsin, where he died in 1927.

In 1897 Benson was listed as Professor of Physiology of the Nervous System. His service in this capacity during the next two years was nominal, as he was on sick leave most of the time, and died in 1899.

T. B. Wiggin was elected Professor of Physiology to succeed Benson. He was an alumnus of the class of 1886, although he had attended the New York Postgraduate Medical School, Johns Hopkins, and London College Hospital. Three years later he became Professor of Medicine. In 1908 he went to the Dental College of Northwestern University as Professor of Physiology, and at the same time was Professor of Physical Diagnosis in the Northwestern University School of Medicine.

After Benson's death, in 1899, L. H. Mettler was made Professor of Physiology of the Nervous System. He was graduated from Jefferson Medical College in 1886, and at the Medico-Chirurgical College attained considerable prominence in clinical neurology. His name did not appear on the faculty list after 1900.

In 1897, at the recommendation of Governor Altgeld, a nominal affiliation with the University of Illinois was effected. By this time the authorities realized the necessity of an internal reorganization of the College. Since the Chair of Physiology was vacant, they began by inviting George P. Dreyer of Johns Hopkins to be Professor of Physiology, and he accepted. The course consisted of four hours of lectures a week through two terms and six hours of laboratory work through one term. The new American Textbook of Physiology was adopted. At that time the bulletin carried the statement that chemistry and anatomy had been the only courses offering laboratory work from the beginning of the institution. It may be assumed, therefore, that Dreyer found little or nothing with which to work. On a previous trip to Europe, he had secured designs of some of the best laboratory apparatus then available. Since laboratory supply houses in this country were not making physiologic equipment at that time and the Harvard Apparatus Company was not yet functioning, Dreyer induced the Waltham Watch Company to make a lightweight kymograph. For simplicity of design and ease of graded control it was superior to the then standard kymograph. These instruments were purchased in 1901 and a few were still in use as recently as 1945. Later Dreyer induced the Stoelting Company to add physiologic equipment to their stock line of optical apparatus for

chemical and physical laboratories. Since he had to work alone, his task was a stupendous one. It was fortunate that he was a skilled and ingenious artisan, glass-blower and latheman, and could make special apparatus as needed.

Up to that time, there had been no one on the faculty who was not a medical graduate; Dreyer was the first full-time professor, and he was the first to depend on the institution for a living. Being a strictly proprietary school with no financial resources but fees, the treasury was chronically in the red. Stockholders were obliged to dip into their own pockets for contributions. Not infrequently Steele and Quine were forced to advance Dreyer's salary, and not always were they reimbursed by the corporation.

#### PHYSIOLOGY AT THE UNIVERSITY OF ILLINOIS AT URBANA

When the main University of Illinois was opened in 1868 in Urbana, a Professor of Zoology and Animal Physiology was included in the faculty list but no appointment was made. Instead, physiology was taught by the Professor of Geology and Natural History. The first to hold that title was Don Carlos Taft who was appointed in 1871. He appears to have shared the teaching of physiology with Frederick M. Prentice, a physician who was also a Lecturer in Veterinary Science. The catalog states that the anatomy and physiology of domestic animals was taught by lectures, demonstrations and dissections. In 1883, Charles Wesley Rolfe was appointed Assistant Professor of Natural History. Later he became Professor of Geology but continued to teach physiology and hygiene.

Henry Elijah Summers was appointed Assistant Professor of Human Physiology in 1893. He was responsible for the exhibits presented at the World's Columbian Exposition in Chicago. He remained at Urbana until 1898, when he became Professor of Zoology at Iowa State College in Ames, Iowa.

The following year John Hancock McClellan came as Instructor in Zoology, but after four years left for study abroad. Returning in 1907 as Associate in Zoology, he later was advanced to Assistant Professor of Physiology. He was to have served in the Chicago Department also but there is no available record that he actually did so.

In 1897 the appointment of George T. Kemp was made. He had received the baccalaureate from Johns Hopkins University in 1883 and a doctorate three years later. He was graduated in medicine from Long Island College Hospital in 1891. In the meantime, he was Demonstrator in Physiology in the University of Pennsylvania from 1886 to 1887. He continued as Professor of Physiology at the University of Illinois from 1899 to 1908.

In none of the other schools in Illinois are there records of even didactic physiology, to say nothing of productive scholarship, before 1900. Despite

N. S. Davis's contributions, he did not succeed in creating what could be called a School of Physiology. Research in pure physiology began first under the stimulus of Jacques Loeb at the University of Chicago in 1897.

Significant contributions to physiologic knowledge from other fields are to be found in the surgical research work of Nicholas Senn, John B. Murphy, Christian Fenger and others of that period. Although their work came into evidence mainly after 1900, much of it had been done in the eighties and nineties. For example, Murphy in 1896-97 was the first to create successfully a permanent functional anastomosis of a large artery, using the dog for this purpose. Such technics not only furnished a sound basis for the current clinical medicine, but enabled physiology to pursue basic research studies in its own field. Here is a striking illustration of the interplay between two sciences resulting in evident progress in both.



## CHAPTER XXI

# MEDICAL EDUCATION IN ILLINOIS

### INTRODUCTION

By DAVID J. DAVIS, M.D.

**I**N 1765, the first medical school within the confines of the present United States was established by the Quakers in Philadelphia; it is now the University of Pennsylvania. Dr. John Morgan, its founder, in creating the faculty and the curriculum, followed closely the pattern of the Medical School of Edinburgh where he had received his medical education. This general pattern has been closely followed by practically all the succeeding medical colleges in the United States, even up to the present day.

Following an interruption caused by the Revolutionary War, medical schools soon began to appear in the several states along the Atlantic seaboard, especially in the New England and New York regions. Several were created by small groups of resourceful doctors who, for a variety of reasons, had fortuitously come together in relatively small frontier communities. The histories of a number of such institutions have been written in recent years, particularly by Dr. Frederick Waite. One of the most distinguished schools in this category was the College of Physicians and Surgeons at Fairfield, New York, founded in 1825. With the rapid mass movement of the settlers westward in the early years of the eighteen hundreds, physicians from these early medical schools naturally followed the pioneers into the frontier country where their services were then so greatly needed.

As they settled in the great Northwest, these migrating physicians found themselves in communities where it was soon evident that mutual co-operation in many ways was clearly to their advantage, and they were not slow in recognizing this relationship. Consequently, during the critical years of 1820 to 1850, we note the beginning first of medical groups and medical societies, and later of medical colleges, medical publications, and hospitals.

Some such evolution as this transpired to a greater or less degree in all the western states. It occurred in Illinois in a more striking fashion, though with considerable irregularity. The state is nearly 400 miles long. The southern part was early settled by people from the eastern and southern states who either followed or mingled intimately with the still earlier French. St. Louis, Missouri, was early established as a great military and fur

trading post, and later as a great medical center which served southern Illinois most effectively for a long time.

The northern part of Illinois developed in a very different way. Here the Indian problem was a serious one and the settlements by the whites were to a large extent blocked by the Indian treaties made by the government at an earlier time. The Black Hawk War of 1832 changed all this. With the defeat of the Indians, the northern counties were rapidly occupied by the whites, not primarily from the south but from the eastern colonies, chiefly New York and New England. With them came many medical men—a variegated lot it is true—including quacks, midwives, bone setters, fever doctors, hawkers, etc. But among them were also a large number of highly respectable physicians, many of whom had graduated from some one of the medical schools, above referred to, in the East.

In and about Chicago, soon after this great migration in the 1840's, groups of the more resourceful of these physicians again saw fit to create medical schools as their predecessors had done in the East. No doubt the motives that impelled them to do this were mixed, but whatever they were, the services of doctors were in great demand, primarily due to two reasons: (1) a general dearth of competent physicians for general practice, and (2) the existence in this new country of a very high incidence of serious epidemic diseases, malaria, cholera, smallpox and children's diseases being outstanding.

The creation of a motley array of medical schools continued throughout the entire nineteenth century. It is reported that in Illinois fourteen schools existed at one time, and many more were created. Some of them, it is known, died "aborning," as one writer put it.<sup>1</sup> While most of them closed their doors permanently, several at a later time fused or united with other institutions, chiefly the large universities. This "regeneration" resulted to a great degree from the activities of the Council of the American Medical Association at the turn of the century.

Before proceeding with special histories of these colleges, it is pertinent to call attention in some detail to a volume on the Colleges of the West written in 1896; it was edited by H. G. Cutler, formerly of the Newberry Library, and published by the Oxford Publishing Company of Chicago. It is both historical and biographical, and is well illustrated by cuts in photogravure and steel. A large amount of medical information is here presented, covering chiefly the period during the second half of the last century. Fairly detailed histories of the more important and larger institutions are given, with less detailed accounts of the small ones. Certain historical data are found here that are not available elsewhere.

<sup>1</sup> By 1943 not one of all these medical schools continued to exist under its original name.

Also in Volume I (Zeuch) of this series appear histories of the four medical colleges in Illinois that opened their doors before 1850: The Illinois College Medical School of Jacksonville, in existence from 1843 to 1848; Rush Medical College of Chicago, in existence from 1843 to 1943; Franklin Medical College, St. Charles, in existence from 1842 to 1849, and the Rock Island Medical School of Rock Island, organized in 1848 and, after one year, was moved to Davenport, Iowa, and ultimately was merged into the State University of Iowa.<sup>2</sup>

From the above data it is seen that in the year 1850, only one medical college was in existence in Illinois, namely, Rush Medical College, and it remained the only medical college in the state until 1859 when, due to a schism in the faculty, a second medical school was created—Lind University, now Northwestern University Medical School. For the purposes of Volume II,<sup>3</sup> therefore, it will be necessary to continue the history of Rush Medical College from 1850 to 1900; to present the history of Lind University (which later became the Chicago Medical College and still later [1891] Northwestern University Medical School), as well as the histories of the College of Physicians and Surgeons, the Woman's Medical College, and brief histories of several other schools, including the Colleges of Homeopathy and of Eclecticism in Chicago.<sup>4 5</sup>

<sup>2</sup> The historical accounts of these colleges were prepared from the monograph written by Dr. George Weaver who was at that time (1927) a member of the History Committee of the Illinois State Medical Society that issued Volume I. This monograph, published in Vol. 3 (1925) of the *Bulletin of the Society of Medical History of Chicago*, is replete with biographical and institutional data for the period preceding 1850, being particularly complete in lists, both of medical references and general historical contributions.

<sup>3</sup> It has been necessary to extend here and there the time intervals somewhat beyond 1900 for purposes of completing episodes.

<sup>4</sup> *Osteopathy* had its origin in Kirksville, Missouri, in 1892, having been promulgated by Dr. A. T. Still. Since in Illinois little progress had been made before 1900, the complete history of the system is deferred for consideration in Volume III of this series. It may be said here that an Osteopathic Bill was introduced in the Illinois Legislature in 1897-98 but was defeated. For further details see Chapter IV of this Volume.

<sup>5</sup> The Editor has transposed the following from the material collected by Dr. Kellogg Speed in his contribution on "Surgery" (Chap. VIII):

The medical colleges listed in Illinois in 1844 *et seq.* for licensure were:

1. Rush Medical College, Chicago. In 1882-83 it had 549 matriculates and 183, or 33 per cent, graduated. The total number of graduates of this college in Illinois at that time was 909.

2. Medical Department of Illinois College, Jacksonville. This was organized in 1843 and suspended in 1848, but there were 10 graduates in Illinois in 1884.

3. Medical Department of the University of St. Charles at St. Charles, Illinois. This had been organized in 1842, transferred to Rock Island in 1849 and to Keokuk, Iowa, in 1850.

4. Rock Island Medical College. This was organized in 1849 and lectures were given during 1849 and 1850. There was one remaining graduate in Illinois in 1884.

5. Chicago Medical College (Medical Department of Northwestern University). From



RUSH MEDICAL COLLEGE FROM 1850 TO 1900<sup>6</sup>

BY NORMAN BRIDGE, M.D. AND JOHN E. RHODES, M.D.

THE 1850 session of Rush Medical College witnessed an attendance of 104 students, of whom 42 were graduated at its close. Thus the classes were gradually increasing; the college was becoming more favorably known each year, and the clinical work, especially in the demonstrative branch of surgery, was increasing. Beyond the appointment of Dr. J. W. Freer to be Demonstrator of Anatomy, no changes occurred in the faculty. In the announcement for this session, the conditions of graduation were restated and put more systematically and clearly, and it was announced that "graduates of other respectable schools of medicine will be entitled to an *ad eundem* degree by passing a satisfactory examination, paying the graduation fee and giving evidence of good moral and social character."

The most striking innovation this year, however, was a marked reduction

<sup>6</sup> Extracted freely from the monograph "Rush Medical College" published in *Medical and Dental Colleges of the West*, H. G. Cutler, Editor, Oxford Publishing Company, Chicago, 1896.—Editor

1859 to 1864 or 1866, this was organized under the name of the Medical Department of Lind University.

6. Hahnemann Medical College and Hospital, Chicago. Organized in 1859, this school by 1882 had 297 matriculates and graduated 134, or over 45 per cent. The number of graduates in Illinois then was 802.

7. Bennett College of Eclectic Medicine and Surgery, Chicago. This school was organized in 1868 and had its first graduation class in 1869. In 1882-3, it had 147 matriculates and 52 graduates. The number of graduates in Illinois in 1884 was 205.

8. Edinburgh University of Chicago. This was incorporated in 1870. It was a fraudulent institution exposed by the Illinois State Board of Health and became defunct.

9. Woman's Medical College of Chicago, organized in 1870, graduated its first class in 1871, none in 1872. In 1882-3, there were 79 matriculates and 18 graduated, and there were 44 graduates in Illinois.

10. Chicago Homeopathic Medical College, organized in 1876 and graduated its first class in 1877. In 1882-3, it had 125 matriculates, 40 graduates, and the number of graduates in Illinois was 81.

11. College of Physicians and Surgeons, Chicago, organized in 1881 and graduated its first class in 1882-83 when it had 152 matriculates and 65 graduates; there were 9 graduates in Illinois. In 1897, this merged with the University of Illinois.

12. Quincy College of Medicine (Medical Department of Chaddock College, Quincy, Illinois). Organized in 1882, it had 6 matriculates and no graduates.

13. Chicago School of Midwifery and Lying-in Hospital, Chicago, organized in 1880. There were 12 graduates in 1880-81, and 18 graduates in 1881-82.

14. Illinois Medical College, organized in 1894.

15. Jenner Medical College, Chicago, organized in 1892.

16. Hering Medical College, Chicago (homeopathic), organized in 1882.

17. College of Medicine and Surgery—Physiomedical, organized in 1896.

in the fees. The original fees of \$65 were cut down to \$35; the dissecting ticket was \$5 and the tickets of matriculation and for clinical work in the hospital were free. This reduction was allowed to enable men "who will practice medicine to properly qualify themselves . . . and to get rid of the many evils attached to the system of credits which has been too long practiced by the medical schools of the Northwest." In 1851, a hospital ticket of \$5 was added to the list of fees, but the following year (1852) the general tickets were reduced to \$25 but "must be paid invariably in advance by all except those who have previously attended two full courses in this institution."

The United States Marine Hospital on the east side of Michigan Avenue near River Street, was in the summer of 1850 approaching completion. "The Illinois General Hospital of the Lakes" had been chartered by the Legislature in an extra session that had just been held. The hospital had been organized and included a lying-in department, from which much was hoped by way of instruction, and the usual college "clinique" in both medicine and surgery was to go on in this institution.

Now for the first time, the work of each department in the college was outlined in the announcement. Under obstetrics and diseases of women and children it was noted that the "new doctrine of menstruation and ovulation would be discussed." Dr. N. S. Davis was to lecture daily throughout the term and also meet the hospital class in the wards of the hospital "at a stated hour each day, Sunday always excepted." The conditions of graduation were made to include a hospital attendance of at least one term. Dr. W. B. Herrick had charge of the United States Marine Hospital, and the next year the Hospital of the Lakes passed under the care of the Sisters of Mercy of the Catholic Church, to be called thereafter Mercy Hospital.

The year 1857 witnessed several important changes in the faculty. Dr. John Evans retired from practice for other pursuits that brought him fortune and fame. Dr. W. B. Herrick ceased lecturing on account of ill health and was made an Emeritus Professor. Dr. William H. Byford, previously of Evansville, Indiana, became Professor of Obstetrics and Diseases of Women, and Dr. H. A. Johnson was transferred to the Chair of Physiology and Pathology. Dr. John H. Rauch came from Burlington, Iowa, to be Professor of Materia Medica and Medical Jurisprudence.

The spring course of instruction, which had for some years been dormant, was taken up in earnest in 1859 and a session was announced for the spring and early summer, the instruction to be given by Drs. Brainard, Davis, Freer, Byford and Rauch.

The year 1859 witnessed several important changes in the faculty. A disagreement existed between the President (Brainard) and the Secretary

(Davis) of the College—and perhaps extended to others also—as to the policy and course of instruction in the institution. There were besides “diverse incompatibilities” that were personal. Both were men of strong characteristics and fixed notions and beliefs. Dr. Davis and his party were in favor, among other things, of a graded course of instruction, to which Dr. Brainard and others were opposed. Dr. Davis resigned from Rush, as did Drs. Byford, Johnson and Hollister. This group founded at once a rival institution known as Lind University and later as the Chicago Medical College, and the seceding members took with them the clinical service of Mercy Hospital. To fill the vacant chairs at Rush the following appointments were made:

Dr. Jonathan A. Allen—Medicine  
Dr. DeLaskie Miller—Obstetrics  
Dr. A. S. Hudson, Physiology  
Dr. Ephraim Ingals—Materia Medica and Medical Jurisprudence  
Dr. R. L. Rea—Anatomy  
Dr. J. W. Freer—Surgical and Microscopic Anatomy

In the announcement of 1859–60, reference to Mercy Hospital was omitted and the City Hospital, with a capacity of 200 beds, was given as the hospital clinical field of instruction.

The regular fees were raised this year to \$40. In the requirements for graduation the hospital ticket was omitted and “clinical instruction during at least one college term” was required instead.

It was during this summer (1860) that a system of spring and summer instruction was started at Rush Medical College, given to a large extent and often exclusively by teachers not engaged in the regular winter course and having no official part in the government of the college. This continued in one form or another almost without interruption until the regular course was extended to eight months in 1893.

In 1861, Drs. Hudson and Herrick ceased their connection with the College and Dr. Freer's title was changed to Professor of Physiology and Surgical Pathology. A preliminary course of lectures of two weeks was instituted in which Dr. Brainard taught Military Surgery (a most necessary subject at that time); Dr. Blaney taught Toxicology; Dr. Allen, Medicine; Dr. Ingals, Medical Jurisprudence; Dr. Rea, Comparative Anatomy of the Digestive Organs, and Dr. Powell, Surgical Anatomy of Important Regions.

During the following two or three years, owing to the Civil War and the general unsettled state of the country, the college work naturally experienced some vicissitudes. The preliminary term was omitted in the fall of 1862. The City Hospital was soon taken over by the government for a military eye and ear hospital in which service it was continued until the close of the war, when it became the County Hospital.

In 1863, Dr. Blaney was a Medical Director in the army and Dr. E. C.



Carr of Madison, Wisconsin, filled his place for two terms (1863 to 1865). Dr. Holmes became a Lecturer on Diseases of the Eye and Ear in the regular course, and Dr. Miller took Dr. Rea's place as Secretary of the Faculty, a position which he held for 14 years. Dr. I. P. Lynn was appointed Demonstrator of Anatomy, a position which he held until 1866.

During the year 1866-67, plans and preparations were started for another addition to the building. This was completed in 1868; it was a large, square building, with two lecture rooms, one above the other. The upper one was an enormous amphitheater with 625 numbered seats. There was a fine dissecting room and a modest chemical laboratory. The building was well adapted to the teaching of medicine, especially by means of lectures to large classes.

Dr. Brainard, President of the Faculty, died on October 9, 1866. His death was due to cholera, which was epidemic in Chicago at that time. Dr. Brainard was known as the foremost medical man in the Northwest and his death was a serious blow to the college. However, the college had reached a point where its life was not dependent on any one individual, and it went forward with its work without interruption. To the students who had known him and listened to him, his memory as a teacher, a surgeon and a great character became at once a potent force that was to continue to the end of their lives.

Dr. Powell finished the course of Surgery, but no other change in the personnel of the teaching corps was made during this course of lectures. The faculty changes required by the death of Dr. Brainard were made as promptly as possible: Dr. Blaney was chosen President of the College. Dr. Moses Gunn accepted the appointment as Professor of Surgery. Dr. Powell became Professor of Military Surgery and Surgical Anatomy; Dr. William Lewitt became Demonstrator in Anatomy, and Dr. E. L. Holmes was announced as Lecturer on Ophthalmology and Otology.

These changes and additions were all made preparatory to the course of 1867-68, the first one to be held in the new building. Daily clinics were announced for the United States Marine Hospital by Drs. Gunn, E. C. Rogers (surgeon in charge) and W. C. Lyman (resident physician). The County Hospital furnished four clinics a week.

After the Commencement of 1868, still other mutations occurred in the teaching force. Dr. J. P. Ross was appointed to fill the new chair of Clinical Medicine and Diseases of the Chest, and Dr. Charles T. Parkes, a graduate of the class of 1868, became Demonstrator in this department.

In the announcement of this year (1868), the writing of a thesis as a condition of graduation was omitted for the first time and has never been restored. It was wisely concluded that this condition was a hardship to the students, since it was a serious burden to them at a time when they were

preparing for examinations, and that it was not a reliable test of the student's attainments.

In 1871 the failing health of Dr. Blaney led him to retire from active work in the college. He resigned his professorship and the presidency, and was appointed Adjunct Professor of Chemistry and Pharmacy. However, he soon ceased to work and only lived three years. Dr. Freer was appointed President. Dr. Henry M. Lyman was appointed to the chair of Chemistry and Pharmacy. Dr. Ingals resigned the chair of *Materia Medica*, and Dr. Etheridge was elected to the position.

The course of 1871-72 opened auspiciously, but had proceeded only a few days when it was interrupted by the complete destruction of the college building and all its contents by the fire of October 8 and 9. In the confusion of the devastation, the college classes were scattered with the army of houseless and homeless people. Rush Medical College existed only as a legal entity in its vested rights and its trustees and faculty, some of whom were seeking places in which to live and resume business. Its only asset was the college lot on which there was a mortgage for an amount larger than its value. In a few days, however, classes were called together again and lectures were resumed. The small clinical amphitheater at the top of the County Hospital was offered to the college for its use, and the Chicago Medical College generously invited Rush to make use of its dissecting room. Both these offers were accepted, and with these facilities the course was carried through. The trustees of the college then built a temporary structure—the college under the sidewalk—to serve through the period of waiting until a new college could be erected, as was planned, near the projected new County Hospital. The temporary structure was a rude brick affair with a tar roof, an amphitheater at one end and at the other a laboratory over which was a dissecting room. It was unplastered within, very rough, amazingly ugly, but it served its purpose for four years.

In 1876, the college moved into its new and commodious building on the corner of Harrison and Wood Streets, diagonally opposite the new County Hospital.

Dr. Rea resigned the professorship of Anatomy in 1875 and Dr. Parkes was at once promoted to the position. Dr. Albert B. Strong was then appointed Demonstrator.

On April 12, 1877, the college lost by death its second President, Dr. Freer, who was succeeded by Dr. Allen. Several other important changes occurred in the faculty. Dr. Powell resigned his professorship and the chair of Military Surgery was abolished and has not since been restored. Dr. Lyman was transferred to the chair of Physiology and had added to his duties the teaching of the Diseases of the Nervous System. Dr. Walter S. Haines was appointed Professor of Chemistry and Toxicology, to give

practically his entire time to the college work in this department. The teaching of chemistry in the spring term was omitted, except in the laboratory; thorough although not extensive laboratory courses were instituted, and the following year were required as a condition of graduation.

This year (1877) witnessed the first announcement of any clinical work in the college, except in the Department of Surgery. Prior to this Dr. Gunn had had a surgical clinic which was uniformly successful and valuable. Now the following clinics were announced: Diseases of the Nervous System by Dr. Lyman; Diseases of the Heart and Lungs by Dr. Ross; Medicine by Dr. Bridge, each to be held once a week throughout the year. The following year a clinic on Skin and Venereal Diseases by Dr. J. N. Hyde was announced. Thus was inaugurated a wider scope of clinical teaching in the college. In 1880, four more clinics were added to the list: Orthopedic Surgery by Dr. Owens; Diseases of Children by Dr. Miller and Dr. Knox; Gynecology by Dr. Byford and Dr. Nelson, and Diseases of the Eye and Ear by Dr. Holmes. In 1882, the clinic in Orthopedic Surgery was permanently dropped from the list, Dr. Owens having resigned his chair. In 1884, a clinic on Diseases of the Throat and Nose by Dr. E. Fletcher Ingals was added, later enlarged to include also Diseases of the Chest. At the same time a second clinic on Surgery was begun by Drs. Gunn and Parkes. In 1890, the service in the Department of Skin and Venereal Diseases was increased to two clinics a week of one hour each.

In 1879, Dr. Miller requested that his chair be divided and a separate chair of Gynecology instituted. This request was granted, and the position was accepted by Dr. Byford.

In 1881, Dr. Danforth was appointed Professor of Pathological Histology and Lecturer on Renal Diseases but resigned the following year. Both he and Dr. Owens, who had also resigned, immediately accepted positions in the Chicago Medical College.

The college suffered loss by death of four of its senior members within the years 1887 and 1890: Drs. Gunn, Byford, Ross and Allen. Dr. Parkes was transferred to the chair of Surgery, and the chair of Anatomy was taken by Dr. Arthur D. Bevan. Dr. Etheridge was transferred to the chair of Gynecology, and Dr. D. R. Brower became professor of Mental Diseases, Materia Medica and Therapeutics in his stead. Dr. Bridge, who had for several years been Professor successively of Hygiene and of Pathology, and adjunct in Practice of Medicine, was transferred to the chair of Clinical Medicine.

In 1889, Dr. Nicholas Senn was appointed Professor of the Principles of Surgery and Surgical Pathology, as a colleague of Parkes. He resigned in 1890, but on the death of Dr. Parkes early in 1891, he was appointed Professor of Practice of Surgery and Clinical Surgery, Dr. John B. Hamilton



being at the same time appointed Professor of Principles of Surgery and Clinical Surgery.

In 1888, Dr. Miller, after a service in the college of nearly 30 years, resigned his active work and became Emeritus Professor. Dr. Knox was appointed in his place, but in 1892 the chair of Obstetrics became again vacant by the untimely death of Dr. Knox. The duties of the department were assumed by Dr. Etheridge, and Dr. Stehman was appointed Clinical Professor of Obstetrics. The next year Dr. E. Fletcher Ingals was appointed Professor of Laryngology, and in 1891 the title of his chair was changed to Laryngology and Practice of Medicine, and in 1893 to Laryngology and Diseases of the Chest.

Dr. Harold N. Moyer was appointed Professor of Physiology on the transfer of Dr. Lyman in 1890, but the following year became Adjunct Professor of Medicine and was succeeded in the Department of Physiology by Dr. William A. Locy, who in turn was succeeded the following year by Dr. John M. Dodson. In 1891 Dr. Sanger Brown was appointed Professor of Hygiene and Medical Jurisprudence. Dr. William T. Belfield became Professor of Bacteriology. At the same time the teaching corps was enlarged by the addition of three Adjunct Professors of Medicine: Drs. Moyer, Herrick and Salisbury, and numerous other auxiliary teachers, made necessary especially by the enlargement and change in character of the teaching in the college. In 1889, the list of teachers outside of the members of the executive faculty was 22; in 1891, it was 33, and in 1895, it had grown to 61. The great increase in the teaching force had been made necessary by the introduction of recitation teaching, by the enlargement of the laboratory and practical work, and the rapid increase in the size of the classes.

A new feature was introduced into the curriculum in 1882 in the teaching of dental anatomy, physiology, pathology and surgery, and constituted a recognition by the college of the fact that dentistry is a specialty of medicine. Three eminent dentists, friends of the college, had long urged this step; they even advocated that all dentists should be graduates in medicine, and two of them had attended the college and had graduated in 1880, while the other had in 1881 received the honorary degree of Medicine. Dr. W. W. Allport was appointed Emeritus Professor of Dental Pathology and Surgery, and Dr. T. W. Brophy actively to the same chair, to give a few lectures on these subjects. Dr. E. S. Talbot was appointed Lecturer on Dental Anatomy and Physiology, and clinical instruction in dentistry was given in the Central Free Dispensary.

In response to this interest in dentistry, there was organized the Chicago Dental Infirmary for the teaching of the technical branches of dentistry to medical graduates. Several members of the faculty of Rush Medical College joined with the dentists effecting this organization. The school was of the

highest order of excellence but had a standard that was altogether too high for the public to appreciate. It was eventually transformed into an ordinary high class dental school and was called the Chicago College of Dental Surgery, and in this form became one of the largest dental schools in the world.

It seems to have been, all through the history of Rush Medical College, the impression of its friends that it ought, if possible, be attached to a strong university. Very early in its career, negotiations were entered into for a union with a Catholic university projected for Chicago, but this university never was created. Early in the 1870's, a union was formed with the first University of Chicago, but it was a union in name only. The college treated the union as a tentative arrangement and the relation soon ceased. In June 1887, the college made another alliance, this time with the Lake Forest University, a Presbyterian institution at Lake Forest, Illinois. This union did not involve any close university relations; the college retained its autonomy and conducted its work and business in its own way. The relationship was entirely amicable but the friends of the college never ceased to wish that it might be closer and more helpful toward a higher medical education and more scientific research.

The system of instruction began to assume the graded character in 1880, and by March 1883, definite conditions of admission into the school were defined whereby all applicants for admission would be examined "in the elements of physical science as taught in common school text books." Later the conditions were changed so as to admit, without examination, graduates of colleges, academies and high schools, holders of county and state teachers' certificates, and special students not seeking the degree. These conditions stood without change until 1888, when the acceptance of a teacher's certificate was limited to that "of the first grade." The following year (1889), the character of the examination was changed to cover "the branches of a good English education, including mathematics, English composition and elementary physics." In 1891, the specified branches to be covered by admission examinations included "the elements of algebra and geometry, English composition, elementary physics, rhetoric and logic and the rudiments of Latin." In 1895, students found deficient in any of the branches were allowed to make up their conditions during the freshman year.

When it became apparent that more space would be required for laboratory and recitation rooms, a new brick and stone laboratory building was erected in 1893 directly opposite the main college building. The Anatomical Department was situated on the top floor, the floors below being occupied by the laboratories of chemistry, pathology, physiology, histology, bacteriology, materia medica; by recitation rooms and offices. This made the main building more useful for the increased clinical instruction.

The part performed by Rush Medical College in the creation of the Presbyterian Hospital is a creditable one. Dr. Ross was perhaps more instrumental in the initiation of this project than anyone else and it was Dr. Ross himself, a staunch Presbyterian, who enlisted the church of his faith in the organization of a hospital association for this purpose. In the winter of 1883, the college and the Presbyterian Hospital Association, already chartered by the State of Illinois, made an agreement whereby the college deeded the lot and unfinished building to the association on condition, among other things, that the latter should finish the building and open and maintain it perpetually as a hospital. The association immediately took charge, finished the building and opened it as a hospital in 1884; it was capable of caring for 80 patients. A medical staff was appointed. Very soon the hospital was full of patients and more room was needed. Finally, the association was able to erect the greater Presbyterian Hospital which had a capacity of 300 beds.

Postgraduate instruction was undertaken in a modest way by Rush Medical College as early as 1879 and was continued with varying success for several years. A course was arranged for practitioners for the last five weeks of the regular term. No change was made in this course until 1881, when it was given in the spring instead of the winter sessions; this plan was more satisfactory and was continued until 1885. However, the classes were small and the efforts to conduct a postgraduate school in the midst of undergraduate instruction was not too successful and the college abandoned this part of its teaching program. After that, a large number of postgraduate students came to take such courses in the laboratories and clinics as they wished, and this has perhaps been more successful than the original plan of instruction.

The history of Rush Medical College is an ideal example of growth from a humble and poor beginning to a climax of success in every particular. It was like the growth of the western country as a whole. The college did not attempt to force public sentiment or institute reforms ahead of the needs of the country. For many years it constantly urged the alumni and the profession to demand better education on the part of medical men and better work by medical colleges. Improvements have been made step by step as conditions seemed to warrant and in strict accordance with the fixed policy of the institution—to equip its graduates in a high degree for the practical work of the profession. Rush Medical College consistently held to the standard of thoroughness of teaching of the art of the doctor. Its career and those of its alumni have proven it a great school for the real life duties of the practitioner.



# NORTHWESTERN UNIVERSITY MEDICAL SCHOOL (CHICAGO MEDICAL COLLEGE)

By SAMUEL J. JONES, M.D.<sup>7</sup>

**A**LTHOUGH this school had had a corporate existence of but 31 years, the institution known since 1891 as Northwestern University Medical School has been the pioneer in at least four reforms which have radically affected the course of medical education in the United States.

1. From the first the founders of the school established a high standard of attainments for the required admission of students of medicine. In the words of Dr. Hosmer A. Johnson, one of its founders, "they considered medicine as a liberal profession, and they determined to strive for the broadest and most liberal culture on the part of those who should come to them for instruction." The result of this determination was that, although the class in attendance upon the first course of lectures was small, its members consisted of young men who enjoyed a more thorough education in the sciences and the classics than the students usually found in the medical schools of this country. This is one of the four beneficial reforms in the medical education of the country which originated with the institution now known as Northwestern University Medical School.

2. With this enforcement of a standard of preliminary education was the establishment and development of "the graded curriculum, by which a definite number of branches are assigned to each year in such natural order that the mastery of one group makes the mastery of the next easier and the accomplishment of the whole more comprehensive and complete." As at first adopted in 1859, the curriculum embraced two courses of instruction. The studies embraced by the first course were theoretical—designed for

<sup>7</sup> Dr. Samuel J. Jones (1836-1901) was for many years a distinguished member of the faculty of the Chicago Medical College (now Northwestern University Medical School). He was one of the early physicians in Illinois to specialize in ophthalmology and otology (1870). His contributions are voluminous and many appear in the early Transactions of the Illinois State Medical Society. Dr. Jones was the first Head of the Eye and Ear Departments of both St. Luke's and Mercy Hospitals.

In the volume on *Medical and Dental Colleges of the West* already referred to, Dr. Jones wrote a comprehensive history of Northwestern University Medical School. Since it appears to be the most inclusive history of that school up to that time (1897), the History Committee has chosen to reprint selected portions for Volume II. In abbreviated form, this chapter will present the history of approximately the first forty years of the Northwestern University Medical School of Chicago.—*Editor*

the acquisition of professional knowledge and scientific principles—and were preliminary to the more practical branches of the second course. And yet this classification of medical studies, by which the student was first to secure the principles of his adopted profession and then be taught to apply them, was a marked innovation in the methods of medical education in the United States.

3. The third important step taken by this school was that by which, with the extension and expansion of its curriculum, its annual courses of instruction were lengthened. This was also an advance in the methods of medical education in the United States. When first organized, it established a lecture term of five months, which was then longer than that of the only other medical college in this city, and equal to that of any medical school in the country. Since then the annual course was lengthened month by month, until it covered two-thirds of a year by 1897.

4. Northwestern University Medical School must also be accorded the honor of inaugurating and establishing in this country a practitioners' course or, as it has now become generally known throughout the country, a postgraduate course.

For some time previous to the first formal meeting of those who believed that the occasion was favorable for the establishment of a medical school upon a higher plane than any then existing, a number of the prominent and scholarly physicians of Chicago had been quietly but enthusiastically discussing the enterprise in an informal manner. Several of them had for years held important chairs in the faculties of other medical colleges, and they were all, both by education and experience, well qualified to place the proposed institution upon a broad and enduring foundation.

The first informal meeting to consider the matter was held on March 12, 1859. Drs. Hosmer A. Johnson, Edmund Andrews, Ralph N. Isham and David Rutter were present. It was announced by Dr. Johnson that the object of the meeting was to organize a medical department of Lind University on the basis of a proposition made to them by the trustees of that institution and submitted for consideration. Dr. Johnson thus formally opened the meeting and was elected its chairman.

The proposition was considered and accepted by them as made by the executive committee of the university, at the head of which was Sylvester Lind, the founder of that institution. It provided that the university should furnish the medical department with rooms for instruction free of rent for three years. At the end of that period, it should provide either a permanent building or suitable rooms for the department. After paying current expenses, the matriculation and graduation fees were to accrue to the university, the professors to be nominated by the faculty but appointed by the Board of Trustees. All expenses, excepting room rent, were to be met by

the faculty out of the funds accruing to the medical department. The degrees were to be conferred by the university Board upon recommendation of the Faculty of Medicine.

Having accepted this proposition, it was resolved to establish Professorships of Midwifery and Diseases of Women and Children, Physiology and Histology, Practical Medicine, Principles and Practice of Surgery, Surgical Anatomy and the Operations of Surgery, Descriptive Anatomy, *Materia Medica* and General Therapeutics, Medical Jurisprudence, Inorganic Chemistry, General Pathology and Public Hygiene, and Organic Chemistry and Toxicology.

The following nominations were then made: Dr. Rutter, Emeritus Professor of Midwifery and Diseases of Women and Children; Dr. Johnson, Professor of Physiology and Histology; Dr. Andrews, Professor of the Principles and Practice of Surgery, and Dr. Isham, Professor of Surgical Anatomy and the Operations of Surgery. It was further resolved that Drs. Johnson, Andrews and Isham be a committee to wait upon Drs. Nathan S. Davis and William H. Byford to request their acceptance of the nominations to the chairs respectively of Practical Medicine and Midwifery and the Diseases of Women and Children. At the next meeting it was announced that these chairs were accepted by Drs. Davis and Byford.

At the first meeting of the faculty, held March 12, 1859, it was decided that the chairs of descriptive anatomy, physiology and histology, inorganic chemistry, *materia medica* and general therapeutics, general pathology and public hygiene constitute the first course of instruction, and that those of surgical anatomy (with the operations of surgery), obstetrics and the diseases of women and children, organic chemistry and toxicology, and practical medicine constitute the second course, and that the two courses be given simultaneously. A lecture term of five months was subsequently established. Thus was the first graded method of medical instruction inaugurated in the United States. It will thus be seen that the new medical school boldly announced its program to be a course of instruction scientifically graded, with longer terms of instruction than those of other colleges.

At the second meeting of the faculty, held on March 15, 1859, an invitation was extended to Dr. John H. Hollister, late of Rush Medical College, to accept the chair of Descriptive Anatomy, which he did. The organization of the faculty was completed by the appointment of Dr. M. K. Taylor to the chair of General Pathology and Public Hygiene; Mr. F. Mahla to the two Professorships of Inorganic and Organic Chemistry; Mr. H. G. Spafford to the chair of Medical Jurisprudence, and Dr. Titus de Ville to that of Descriptive Anatomy.

At the third meeting of the faculty held on March 24, 1859, Dr. Johnson



was elected President, Dr. Isham Recording Secretary, Dr. Byford Corresponding Secretary, and Dr. Andrews Treasurer. The faculty evinced its desire to allow none to pass from the school into the active practice of medicine without being qualified to assume the responsibilities of their profession. It was, therefore, resolved that the faculty invite the Illinois State Medical Society to appoint a committee of two to attend the examinations of candidates for graduation in the Medical Department of Lind University and vote upon their qualification for the degree of Doctor of Medicine.

In August 1859 when the faculty of the college had been fully organized, a public dispensary was established in connection with the medical school with Drs. Andrews, Byford and Horace Wardner as physicians and surgeons. During the first year more than 3000 patients were treated by them. Both school and dispensary were installed in Lind Block where lecture and anatomical rooms were fitted up and a museum, with Dr. Wardner as its first curator, was established for illustrative purposes. The opening ceremonies, held on October 10th, were conducted by Dr. Johnson as President of the Faculty, and were inaugurated with prayer by Rev. J. Ambrose Wright, the address being delivered by Dr. Davis.

In connection with the first course of lectures, Drs. Davis and Andrews were appointed to conduct two clinics, including one daily bedside lecture at Mercy Hospital and two weekly lectures at the college. This was a distinct advance in the line of practical teaching over anything which had before been attempted in the West.

The first term opened on October 11, 1859 and terminated on March 5, 1860. There were but 33 students in attendance.

In November 1861, the trustees of Lind University requested the medical faculty to release them from that portion of the contract which required them to provide the medical department with new quarters at the expiration of three years. The faculty acceded to the request and immediately proceeded to establish an independent organization under the name of the Chicago Medical College. In accord with this determination, during the summer of 1863 the faculty commenced the formation of a building fund from the lecture fees. A contract was made for the purchase of the lot and building at 1015 State Street near 22nd Street, which was occupied by the college during the spring of 1864 when, by mutual agreement, each party was released from the original contract and the members of the faculty became the trustees of the new college.

The Chicago Medical College continued its work at this location for six years, steadily increasing its educational facilities, extending its curriculum and, while maintaining its higher standard both for admission and graduation, gaining a substantial increase of attendance and of public confidence. On April 25, 1868, the faculty extended the two years' curriculum

to three, each course consisting, as before, of a separate group of subjects or studies. Still the college was in the advance, no medical school in the United States having then adopted so complete and extended a curriculum of study.

The year 1869 marks another epoch in the life of this institution. An arrangement was made by which Chicago Medical College, while retaining its name, became a department of Northwestern University. What was also important, besides its name, it retained control of its professorships and curriculum of study.

More extended facilities for instruction were already demanded and ground had been leased from the authorities of Mercy Hospital and adjoining that institution for the erection of a suitable and commodious building. This was completed and occupied in September 1870. The introductory lecture was delivered by Dr. Johnson, which marked the opening both of the new building and the college session of 1870-71.

The structure thus occupied by the Chicago Medical College, which seemed to possess more of an element of permanency about it than any in which the institution had hitherto been established, was a substantial building of brick costing \$25,000. It contained two large lecture rooms or amphitheatres so that instruction could be given to different classes during the same hour. The dissecting rooms of the Anatomical Department were airy and well lighted, and there were well appointed laboratories for chemical and microscopic work. In the museum was a large and continually increasing collection of anatomical and pathological specimens, while the library and reading rooms supplied the students with many valuable books and periodicals, enabling them to keep abreast of the medical literature of the day. Located in the basement of the college building was also the South Side Dispensary, its patients being subdivided into classes, each class having a separate room and an attending physician. For clinical instruction here the students were divided into small groups and assigned in rotation to the different rooms and afforded an opportunity for them to make personal examination of the patients with their instructors.

The college occupied this site for 24 years, under the contract made with the authorities of Mercy Hospital. During this period great progress was made in all directions. One most important feature of this growth was the firm establishment and extension of its system of clinical instruction, its basis being the material furnished by Mercy and St. Luke's Hospitals, the dispensary and such ambulatory patients as could advantageously be brought before the classes in the college amphitheatres. At the time of the removal of the college to its present location in 1894, some 15,000 patients were being treated annually at the dispensary. The clinical classes were distributed among Mercy, St. Luke's and Wesley Hospitals.

As previously noted, a marked extension of the curriculum to a three year course was made in 1868. A fourth year was later added. It is still an essential for graduation that the student shall have had a hospital attendance during the last two years of the course, and this, furthermore, in conjunction with a lengthening of the annual course, which in 1890 had been increased from six to seven months and later from seven to eight months.

It was midway between these two decades (1870-1890), so pregnant with results redounding to the fame of Chicago Medical College, that the faculty established a practitioners' or postgraduate course. It was inaugurated in March 1880, and, as it was unique in the scheme of medical education then in vogue in this country, it is thus described in the words of the annual announcement for the year: "This course is designed for the benefit of practitioners and is entirely distinct from that for students. It begins the day following public Commencement and continues four weeks. Especial attention is given to bedside clinical teaching. Short clinical courses are given in General Medicine and Surgery, and in Gynecology, Nervous Diseases, Ophthalmology and Otology, and other specialties. These are accompanied by didactic lectures on the same subjects. The aim is to give a comprehensive summary of the most recent advances in these departments. An opportunity is also given to review scientific branches. A course is given in Surgical Anatomy. The dissecting room is open and the supply of material abundant. Practical work may be pursued in the chemical and microscopical laboratories. A short review of some of the most important advances in Pathology is given, illustrated by diagrams and with microscopes. Special courses of didactic lectures will also be given having reference to the needs of those who desire to make a thorough review of their professional studies."

After the expiration of the first 20 years' contract between Chicago Medical College and Mercy Hospital, and after a new contract had been made by them by which the former leased its building site, arrangements were concluded by Northwestern University for the purchase of ground at the corner of Dearborn and 24th Streets. During the year 1890, the university purchased 450 feet frontage upon which were subsequently erected the medical, pharmaceutical and dental schools and Wesley Hospital. It was the munificence of William Deering of Evanston that thus enabled the medical school to enjoy the splendid facilities with which it is now supplied. His gift of \$20,000 to the university made possible the purchase of the present ample site, and within the succeeding three years arose the buildings now forming these professional departments. Chicago Medical College became Northwestern University Medical School, and the title of Dean of the school was substituted for that of President.

In 1893 the main laboratory building was completed. The name of Dr.



Ephraim Ingals is closely associated with this building, because of the \$10,000 which he presented to the medical school in 1893 to aid in its erection.

In 1894, William Deering made a further donation to the university by endowing the N. S. Davis Professorship of Physiology. In further recognition of the valuable services of Dr. Davis as the venerable and beloved Dean, the medical building which stands beside the laboratory building was named Davis Hall.

## COLLEGE OF PHYSICIANS AND SURGEONS OF CHICAGO 1882-1913:<sup>8</sup> THE GENESIS OF A GREAT MEDICAL COLLEGE

By D. A. K. STEELE, M.D., LL.D.

THE names of the founders of this institution are chiseled upon the cornerstone of the old College of Physicians and Surgeons at the northwest corner of Honoré and Harrison Streets, now known as the College of Dentistry of the University of Illinois. A. Reeves Jackson, Charles Warrington Earle, Leonard St. John, Samuel A. McWilliams, and the writer's are the names chiseled on the face of this cornerstone, commemorating the memories of five men to whom the College owes its inception, names, ideals and development. For ten years they were in supreme command of its policy, faculty, and curriculum, and directed its course with ability, sagacity and success. They were men in the prime of life, honored in this profession, and all had experience in medical teaching in other colleges. They possessed the individual requirements of a medical teacher: knowledge, experience, aspiration, enthusiasm, honesty and conscience—the foundation stones of character.

Jackson, Earle, McWilliams and St. John have passed on. This Medical

<sup>8</sup> A comprehensive and authoritative history of this college was published in 1896 in the volume on *Medical and Dental Colleges of the West* already referred to. It was prepared jointly by Dr. D. A. K. Steele, then President of the Board of Directors, and Dr. W. E. Quine, then President of the Faculty. Both of these men for years had been intimately associated with the organization and the work of the college, and could therefore give firsthand information from its inception. At a later date both Dr. Steele and Dr. Quine published separate histories of the school dealing primarily with its early organization, and how it came into being. Both statements are authoritative and intimate in their approach. Dr. Quine's article was published in the *Bulletin of the Society*

College is a monument to their lives, to the lives of others who labored with them and who also have gone before their Maker, to still others who are laboring and struggling on and on to build up this great Medical Department of the State University; to uphold the honor and dignity of the medical profession, and to carry out the ideals of its founders and supporters.

It is always interesting to trace the origin of institutions of learning, and to investigate the underlying causes that brought them into existence; to study the characteristics of the men whose foresight and vision moved them to found a new medical college in Chicago; to look behind the men themselves to their teachers, who by their precept and example had inculcated ideas and ideals into the minds of these men that would mould their characters and dominate their lives with aspirations for the attainment of the highest and best attainable in medical science and medical education. Three of the founders of this College were graduates of the old Chicago Medical College, now the Medical School of Northwestern University. Charles Warrington Earle, Samuel A. McWilliams, and the writer had

---

*of Medical History of Chicago.* However, Dr. Steele's article was published in an alumni publication and was given very little publicity. His account is republished herewith.

In these documents, for some unexplained reason, biographies of two of the founders, Drs. St. John and McWilliams, have not been found. To cover this deficiency, there follow herewith brief outlines of the careers of these two men as published in "*Who's Who in Chicago and Vicinity*," 1905.

*Dr. Leonard St. John*, physician; born St. Catherines, Ont.; son of Samuel Leonard and Martha Ann (Seaman) St. John; educated private schools and academy at St. Catherines, Ont., and at McGill University, Montreal, graduating from the medical department in the class of 1872, and from the College of Physicians and Surgeons of Ontario, Canada, 1872; mem. Royal College of Surgeons of England (1873); married Anna B. Balch (now deceased). Began practice in New York City, 1874-75; came to Chicago, December, 1875. Surgeon at St. Anthony's Hospital; one of the staff at Cook County Hospital. One of the founders of the College of Physicians and Surgeons of Chicago, and professor of surgery in same. Member: Chicago Medical Society, Illinois State Medical Society, American Medical Association. Clubs: Illinois, Washington Park. Office: 103 State Street. Residence: 539 W. Monroe Street. Died 1920.

*Dr. Samuel Anderson McWilliams*, physician; born Ireland, February 7, 1839; son of David and Margaret (Anderson) McWilliams; graduated University of Michigan B.A., M.A., 1861; attended Medical Department same, 1863; taught high school at Waupun, Wisconsin, 1863-65; grad. medicine Northwestern University Medical College, Chicago, 1866; m., 1st., Waupun, Wisconsin, February 28, 1869 (died); m., 2nd., Chicago, January 2, 1884, Bertha Scheibel; Children: Grace, Estella, Samuel, Edwin. Was associated in practice of medicine with Professor Nathan S. Davis, Sr., 1866-8; lectured on physical diagnosis and anatomy in Chicago Medical College, 1866-7; was 10 years attending physician to Cook County Hospital, 1878-88; was professor of chest diseases and clinical medicine, Chicago College of Physicians and Surgeons, and was vice president and director of same, from time of its dedication, September 26, 1882, until 1891; professor of anatomy in Woman's Hospital Medical College, 1870-5; professor of eruptive fevers and physical diagnosis Jenner Medical College, 1901-03; professor of physical diagnosis and chest diseases in Dearborn Medical College since 1903. Member: Chicago Medical Society, Illinois State Medical Society, American Medical Association, Chicago Medicolegal Society, Physician's Club, American Academy of Medicine. Presbyterian. Residence: 3456 Michigan Avenue. Died 1917.—*Editor*

listened to the matchless medical oratory of Nathan Smith Davis, the Nestor of the medical profession, to Hosmer A. Johnson, with his polished address and graceful personality, as well as to the practical, forceful diction of the great surgeon, Edmund Andrews. Each had been impressed by their ideas and idealism, and filled with aspirations to emulate their characters and reputation and to become surcharged with their professional spirit and enthusiasm for the profession of medicine. Even as we strove to forget some of their prescriptions and lectures a few years later, we could forget the lectures, but never the men who had left the impress of their personality on our formative minds.

To Earle must be given the credit of first broaching the question of establishing a new medical college in Chicago on the west side of the City, near the Cook County Hospital. In 1876 he began to agitate the project of establishing a new medical college adjacent to the County Hospital, but notwithstanding his energy, enthusiasm, and courage, he did not succeed in interesting a sufficient number of suitable people in the enterprise to make a successful start, so the project was dropped for five years.

Early in 1881, he spoke to A. Reeves Jackson about the advisability of starting a new medical school adjacent to the County Hospital, and Jackson, who was a lecturer in Rush Medical College, readily assented to Earle's proposition. After several conferences and prolonged discussions, a preliminary meeting was held May 4, 1881, in the Grand Pacific Hotel, Chicago, to consider establishing a new medical school in Chicago.

The time was propitious. The growth of the city had been phenomenal and many of the leading medical men of the city, not then connected with existing medical colleges, foresaw that Chicago was bound to become a great medical center. At this preliminary meeting four of the founders and three men not subsequently connected with the enterprise were present. Dr. Jackson was chosen president and Dr. Steele secretary of the meeting.

After a full discussion of the question it was considered advisable to organize a new medical school in Chicago, having for its aim the elevation of medical scholarship. On motion of Dr. McWilliams, the embryonic medical venture was christened "The College of Physicians and Surgeons of Chicago," and this name was retained until 1913, when the college was affiliated with the University of Illinois, when it became known as the College of Medicine of the University of Illinois. Drs. Jackson, Earle, and the writer were appointed a committee to procure a license and to incorporate under the general State law. Dr. McWilliams was made chairman of a committee to look up a suitable location and ascertain the price of ground for the college site; and still another committee, of which the writer was chairman, was appointed to report on chairs, lectureships, etc., and to suggest the names of suitable persons to fill them.



The license to incorporate was issued by the Secretary of State July 2, 1881, to Drs. Jackson, Earle and the writer, and on October 14, 1881, a final certificate of incorporation was issued to Drs. Jackson, McWilliams, the writer, St. John, and Earle, the founders and incorporators. On June 23, 1881, Dr. Jackson, on behalf of the Committee on Grounds and Location, reported that the lot on the northwest corner of Harrison and Honoré Streets, 95 x 100 feet, could be secured for college purposes. Drs. Jackson and McWilliams were appointed a purchasing committee and authorized to secure the lot for the lowest cash price. On July 14, Dr. McWilliams of this committee reported that a contract had been made for the purchase of the lot for \$5,000, all cash, and the purchase was immediately made. Drs. Jackson, McWilliams, Steele, and St. John advanced the amount in equal shares. The capital stock of the new corporation was fixed at \$30,000, and the entire stock was subscribed by the five incorporators. Bylaws were adopted, and Drs. Jackson, McWilliams, Steele, St. John and Earle were elected the first Board of Directors.

In the preliminary announcement the following notice appeared:

"The Faculty beg to state that this college has been organized in the interest of a more thorough and practical education than is usually furnished by the medical schools of this country. The Faculty believes that the medical practitioners who have been long engaged in their calling, and who realize the difficulties under which many of them have labored, desire that those who succeed them may receive more and better facilities during their pupilage than were obtained by them for becoming qualified for their work. In all other departments of learning it is deemed necessary to so classify and grade different studies that the pupil is systematically led from those of an elementary and fundamental character to the more advanced branches. In medicine, however, a science in which accuracy and completeness of attainment by its votaries involves more important interests than any other, this reasonable and philosophical system is, for the most part, wholly ignored. The Faculty believes the time has come when medicine should no longer occupy this exceptional position, and in deference to the demand of the profession generally for a more systematic plan of college instruction than is usually offered, have adopted a system of instruction extending over three years and including two or more graded winter sessions of six months each."

On July 18, 1882, at a stockholders' meeting called for the purpose, the capital stock of the corporation was increased to \$60,000, each member of the Faculty subscribing for \$2,000 worth of the capital stock.

The first regular session of the College of Physicians and Surgeons of Chicago commenced Tuesday evening, September 26, 1882. The introductory address was delivered by Professor A. Reeves Jackson. At this time the new college building, located on the northwest corner of Harrison and Honoré Streets, opposite the Cook County Hospital, had been completed under the direction of George H. Edbrooke, the architect, and as a result of his labors and the indefatigable work of Dr. McWilliams, Chairman of the

Building Committee, the college edifice was scarcely surpassed by any in this country in beauty of design, excellence of construction, or adaptation to its purposes.

Dr. McWilliams organized the West Side Free Dispensary, which occupied the first floor of the building, and which was under the exclusive control of the College Faculty; patients being classified according to diseases and different rooms assigned to each class, students thus having an opportunity to learn the details of actual practice in the various specialties.

When the session opened September 26, 1882, there was present a class of 100 students, which gradually increased to 165. At the close of the session, 52 of these graduated.

During the year, 7,504 patients were examined and prescribed for in the college, most of them before small sections of the class in the different clinic rooms on the dispensary floor.

On March 17, 1883, the Board of Directors met to elect a permanent Faculty according to a resolution adopted, the basis of the election requiring that the following four questions should be answered in the affirmative about every candidate before he was eligible for election. (Each member of the Faculty had been elected the first year on probation.)

1. Is he a systematic and capable teacher?
2. Has he a moral character and habits such as will reflect credit upon an educational institution?
3. Is he honorable and trustworthy in his treatment of and dealings with his colleagues?
4. Is he in accord with the general policy of the school, especially in its requirements for admission and graduation of students and its graded system of instruction?

The requirements for graduation at this time were announced as (1) a good moral character; (2) attainment of 21 years of age; (3) three years of study under the direction of a physician in regular standing; (4) attendance on two or more winter lecture courses, the last of which must have been at this college; (5) dissection of each part of the cadaver; (6) attendance on two terms of clinical and hospital instruction; (7) satisfactory examinations; (8) deposit of final examination fee with the treasurer on or before February 1. No honorary degrees to be conferred.

It was at this time that the illustrious name of Quine was added to the faculty list. He was appointed Professor of Medicine, and from that date his dominant personality, wisdom, eloquence, and professional spirit was a source of strength to the College as side by side we labored on together for its best interests.

During the spring of 1890, the writer became satisfied that the future welfare and prosperity of the college depended upon a thorough reorganiza-

tion of the teaching faculty and policy of the college so as to secure for it a greater share of the confidence and patronage of the medical public. He laid his plans before Profs. Quine and Earle, and secured their ready cooperation and support for a reorganization which with the sanction of President Jackson was immediately carried into effect. At a stockholders' meeting April 19, 1893, the capital stock of the college was increased from \$60,000 to \$100,000. A total of \$50,000 was expended this year for the erection of six new laboratories adjoining and connected with the college building. Attendance upon three full winter courses was made obligatory. The curriculum was extended. Much more attention was given to demonstrative and laboratory teaching than formerly. From this time on the progress of the school was rapid, indeed almost phenomenal, as it was the first among the western medical colleges to inaugurate laboratory teaching. The total number of matriculants was 248, 42 of whom were graduates, making a 19 per cent ratio of graduates to resident matriculants.

Professor Bayard Holmes had been elected corresponding secretary, and conducted an energetic correspondence with prospective medical students. The requirements for admission were increased, so that every candidate for admission to the College of Physicians and Surgeons was required to (1) present a certificate of good moral character from a reputable physician, and (2) a diploma or certificate from a recognized college, school of science, academy, normal school, or high school, or other evidence of satisfactory preliminary education. Students unable to meet these requirements were admitted on passing a satisfactory examination in the following subjects: (a) English, including the writing of an essay of at least 200 words on some well-known person or important recent event, the subject to be announced at the time of the examination; (b) mathematics, the examination to cover compound principles and percentage in arithmetic, and fractions and equations of the first degree in algebra; (c) physics, the examination to cover elements of physics as presented in Balfour Stewart's work; (d) Latin, including the rudiments of grammar, translation of easy Latin prose into English, and of English into Latin, the commentaries of Caesar to furnish the basis of both. The plan of instruction was arranged in four separate annual courses. Each year consisted of a winter term of seven months, and a spring term of two.

A year after the World's Fair, 1893, we erected the first medical laboratory building equipped for the use of students in Chicago, in anatomy, bacteriology, chemistry, pathology, physiology, six stories in height, 30 x 100 feet in size. A large supply of equipment and material had been purchased in Europe.

The basement of the laboratory wings contained living rooms for the curator; storerooms, laundry and boiler room. On the first floor were a



reading room, quiz room, coat room and hall. The second floor contained the histological laboratory, with desks and lockers, which was connected and continuous with the microscopical laboratory of the main building, and constituted a single room of 25 x 156 feet, communicating with storerooms and special preparation rooms. The third floor was divided into a pathological laboratory and four connecting preparation rooms, and was complete in its appointments. The fourth floor had a chemical laboratory provided with desks of special design. On the fifth floor was the biological laboratory, 25 x 156 feet, the general arrangements of which were like those of the microscopical laboratory. It contained aquaria, cages for small animals, and other necessities for biological study. Here, studies were carried on in experimental surgery. On the sixth floor was the anatomical department. Each laboratory was thoroughly equipped and perfectly lighted, heated and ventilated. It was confidently asserted that in no other medical college on the continent did students receive as much laboratory instruction.

In October 1893, the College met with a very great loss in the death of its President, A. Reeves Jackson, Professor of Gynecology, the guiding spirit of the institution up to that time. Professor Charles Warrington Earle was elected President in his stead, and guided the affairs of the College during the following year, when his untimely death occurred.

In February 1896, the members of the Faculty and other friends of the college purchased the Post-Graduate Medical School and Hospital for \$50,000 in order to secure additional clinical advantages for the college. It was converted into the West Side Hospital, and was connected to the old college clinical amphitheater by a covered bridge.

During 1896, negotiations were opened by Governor Altgeld with Professor Quine, President of the Faculty, looking toward the affiliation of the College of Physicians and Surgeons with the University of Illinois as its medical department. At the suggestion of the Governor, the Trustees of the University appointed a committee to confer with a similar committee from the college to formulate a plan of union. Professors Quine, Steele and King represented the college in these negotiations with President Draper and a committee of the Trustees of the University. The outcome was that on April 21, 1897, a lease was made to the University of the college property for four years. From this date the college passed under the control of the University. Co-education was introduced, and university methods adopted. The growth and property of the College of Physicians and Surgeons, now known as our College of Medicine, was even more rapid than before. Its reputation and solidity as a part of the State's University were recognized by medical students and its classes grew with amazing rapidity. The attendance in 1895-96 was 235; in 1899-1900, 579, and later 710.

In 1899, the College and the University, realizing that a union of the two institutions was mutually advantageous, entered into a new agreement under a twenty-five-year lease, by which at its termination all the college property and good will became the property of the University. During this lease, one-third of the net profits were to go to the University toward a medical college and endowment fund, two-thirds to go to the stockholders of the college.

Great credit is due to the committee for the successful manner in which it conducted these delicate negotiations to a satisfactory conclusion, by which the college became the medical department of the University of Illinois, and by which during the life of the lease, the faculty retained an advisory relation and made all nominations for vacant faculty positions. On and after May 1, 1900, the College of Physicians and Surgeons became the College of Medicine of the University of Illinois. It was in this year that William H. Browne came as superintendent. He has since been a dominant factor in the development of the college.

The year 1900 was memorable for other events than the affiliation of the College and University on a rental basis. In this year the College had an attendance of 635 medical students. We were growing at a tremendous pace, and were crowded for room. We obtained permission of the Trustees to purchase the West Division High School building and property for \$186,000, and to convert it into a medical college building. We paid \$100,000 cash, and the balance in five annual payments. We also acquired the Illinois School of Dentistry, and in 1901 converted the old medical college building (which in June, 1901, had been partially destroyed by fire) into the present College of Dentistry building. A dental faculty was appointed, and the building was equipped with an up-to-date dental college outfit. For the opening session in October, 1901, we connected the two college buildings by a covered bridge, and also put in a bridge to the West Side Hospital, which had been secured years before by members of the faculty for the use of our students in clinical demonstrations and teaching.

In 1906, other members of the faculty erected the University Hospital with 100 beds in order to afford our students better clinical advantages.

Look at this illustrious list of teachers as I pass them in review before you—all revered members of our old Alma Mater in its early years of sacrifice and service:

Henry Palmer, noted surgeon, Surgeon General of Wisconsin; Robert L. Rea, great anatomist and surgeon; Nicholas Senn, master surgeon, noted author; Christian Fenger, pathologist and surgeon; Alexander Hugh Ferguson, surgeon; John B. Murphy, premier surgeon of the world, whose work was recognized as one of the epochs of medical advancement; J. J. M. Angear, principles of medicine; Frank E. Waxham, intubationist; Walter

S. Christopher, diseases of children; A. W. Harlan, dental surgeon; W. T. Eckley, anatomist; Boerne Bettman, oculist and aurist; J. T. Jelks, genito-urinary surgeon; Albert E. Hoadley, anatomist and surgeon; John A. Benson, physician and physiologist; J. M. G. Carter, sanitarian; Adolph Gehrmann, bacteriologist of international reputation; and many others.

The preliminary affiliation between the College and the University having proved satisfactory, on February 9, 1900, a new lease of the College to the University was entered into for a period of twenty-five years, dating from May 1, 1900 to April 1925. This instrument provided for a Dean, an Actuary, and a Secretary of the Medical Faculty, all to be selected by the President of the University. It also contained a provision for the purchase of the college property by the University at an agreed price, any time during the life of the lease. This arrangement continued in operation until April 30, 1912. The property was owned by the corporation known as the College of Physicians and Surgeons of Chicago. The University of Illinois conducted a medical school for fifteen years in this leased property.

During all this time the college had looked to the organic union of the two institutions, but the state had never contributed one dollar to the support of the medical school. Every dollar needed for the maintenance of the institution had been furnished by the faculty of the college from the fees of its students.

There was an active evolution in medical education at this time, and an enlargement of the requirements for admission to the medical colleges. This had been established by the Committee on Medical Education of the American Medical Association. The elevation of medical education met with general approval by the profession and by our college faculty, but it was found impossible to maintain a state college on these high planes without state support, and the University had never been able to secure an appropriation from the Legislature for its medical college because it did not own the college, but only operated it on rented property.

For several years each biennial session of the Legislature had refused the University a fund to purchase the college. Once only was a bill passed making an appropriation for the purchase of the college, but even then the Governor violated his promise of support to the Trustees and faculty and for political reasons vetoed the bill. Although the lease was made for twenty-five years, the actual life of it was only two years, as new appropriations had to be made every biennium for the support of the University, and the Trustees could only bind themselves for the period of biennial appropriation.

A majority of the stockholders of the college corporation decided they would not continue the lease beyond April 30, 1912, and a communication to that effect was sent to the Trustees of the University. On April 30, 1912,



President James closed the medical school of the University for lack of support.

We were at the parting of the ways. Then the Alumni Association of the college took a hand and saved the day, restoring the college to the University as a gift, aided by the faculty, stockholders, students, and other friends of higher medical education.

Shortly after the Dean had announced that the relations between the two institutions had been severed, and that the college was again a private medical college, a movement was begun by the Alumni Association of the College of Physicians and Surgeons of Chicago which resulted in the appointment of a committee to secure the property of the college for the University of Illinois as its permanent medical department. The Council of the Alumni Association appointed the writer chairman of this committee.

After a strenuous campaign (from July 1912 to January 1913) this committee succeeded in securing every share (2,170) of the capital stock of the corporation of the College of Physicians and Surgeons, as a donation to the University of Illinois, and on March 6, 1913, the title and deed of all the college property was transferred to the University and accepted by the Trustees as the permanent medical department of the University. On that occasion the writer said:

"Mr. President, in handing over to you this deed and bill of sale, I am not only transferring to the Trustees of the University the tangible property of the College, but with it also goes the franchise, the good will, and the high ideals we have maintained for the past thirty-one years in developing the college. We tender you also our faculty, our students, and our alumni, and I pledge you the loyal support of each and every one of them.

"Mr. President, and members of the Board of Trustees, in voluntarily relinquishing the control and ownership of this medical school, we realize that the University is greater than the College, that the State is greater than the University, and that your aspirations and desire to build up a great medical department for the State University are equal, if not superior, to any other similar department in any State in the Union. It is worthy of honor and praise for what it has done, but will be worthy of greater honor in what it promises to do under your guidance and direction in fulfilling its manifest destiny in the future."

This transfer ended the corporate existence of the College of Physicians and Surgeons, and ushered into being the University of Illinois College of Medicine as its medical department for all time, and under the splendid leadership of Presidents James and Kinley, with their vision of the greatest medical college in the country, it has gone on and on and upward in the ranks of medical colleges, fulfilling its manifest destiny, and with the old faculty and many additions of scientifically trained teachers, and the liberal support by University appropriations from the state, it is soon to occupy the magnificent new buildings now being erected for its use in the old baseball park.

President Andrew S. Draper and every Board of Trustees have been our loyal and active supporters since 1897. Since 1913, the state has done its part in contributing funds necessary to the growth and development of your college, and I am sure that President Kinley, his Board of Trustees, and our Dean will continue to do their part with all the energy, enthusiasm and courage of the founders and faculty who led the way.

## WOMAN'S MEDICAL COLLEGE OF CHICAGO

HELGA RUUD, M.D.<sup>9</sup>

VOLUME I of this series contains the names of only two women physicians: Dr. Margaret Logsdon and Dr. Charlotte F. Stringer. Not only were there few women practicing medicine in Illinois during the years 1850 to 1900, but for that matter very few anywhere else in America. This is remarkable as women, since time immemorial, have administered to the sick and have served as healers. It is for the historian and psychologist to explain why they should have gradually abandoned their age-old vocation as physicians. The opinion has been expressed that perhaps witchcraft, that cruel and barbarous plague which swept over Europe and America during the seventeenth and early part of the eighteenth centuries, might possibly have been one of the causes. It was the popular belief at that time that women were in league with the devil to the injury of their neighbors; that they could change themselves into bats and sprites, fly through the air on broomsticks, or enter rooms and kill newborn babies and their mothers. In such an atmosphere it is not surprising that women became afraid to study medicine. However, the inherent desire in women to heal and care for the sick reasserted itself and they eagerly sought to enter the

<sup>9</sup> Dr. Ruud was born in Norway on December 28, 1860. She received her first schooling at a private school and later attended middelskolen, from which she graduated in 1879. In 1880, she came to the United States, serving as a governess. In 1885, she began the study of medicine, graduating from the Woman's Medical College in 1889. The following year she was appointed resident physician to the women's department of the County Insane Asylum at Dunning and remained there for five years. She then went to New York City to study at the Postgraduate Hospital. From 1896 until her retirement a few years ago, Dr. Ruud was engaged in the general practice of medicine among women and children in Chicago, and was clinical professor of obstetrics at the Woman's Medical College from 1896 to 1900. One of her recent activities has been the preparation of this material for Volume II of the series *The History of Medical Practice in Illinois*, a continuation of the work of one of her hospital associates, the late Dr. Lucius H. Zeuch. At the present writing (1954), Dr. Ruud is still alive and well.—Editor

field of medicine, meeting with prejudice, discrimination and obstacles of many kinds, not only from the medical fraternity but also from the general public, women included. Their greatest problem was where to obtain their medical education. All regular schools of medicine were closed to them, but hope rose high when Elizabeth Blackwell, after having been refused admission by twelve regular schools, finally was admitted to the Geneva Medical College in New York in 1847, graduating in 1849, the first woman in the modern world to receive a diploma from an accredited school. Her career is a wonderful record of achievement.<sup>10</sup>

The State of Illinois was slow in providing medical education for its women.<sup>11</sup> Finally, in 1869, Hahnemann Homeopathic College became co-educational and, in 1870, the Woman's Medical College of Chicago was founded.

In 1863, during the Civil War, Dr. Mary Harris Thompson, a graduate of the New England Female Medical College of Boston, came to Chicago. Soon after her arrival she became acquainted with Dr. William G. Dyas and his public spirited wife, Miranda, both of whom belonged to the patriotic war organization called the "Sanitary Commission." Dr. Thompson entered heart and soul into the work of relieving the distress and illnesses of thousands of war widows and orphaned children. Chicago was then sadly lacking in hospitals. She soon recognized the necessity for a hospital especially for women and children. Through the generosity and active cooperation of Dr. William H. Byford, Dr. and Mrs. Dyas and other interested citizens, she established a hospital in May 1865 bearing the name of the Chicago Hospital for Women and Children. From that date until her death on May 21, 1895, Dr. Thompson was head of the medical and surgical service, assisted by a staff of some of the most prominent physicians in the city. The hospital occupied an old building on Clark Street. It soon attracted women of the Western States to its clinical advantages, which was the nearest approach to medical instruction. It thus became the forerunner of the Woman's Medical College.

Dr. Thompson, realizing the need for further medical studies, applied to Rush for admission but was refused. Dr. Byford, a member of the faculty of the Chicago Medical College, persuaded his colleagues to admit a certain number of women students to the college courses. Three women en-

<sup>10</sup> In 1852, her sister, Emily Blackwell, attended a course of lectures at Rush Medical College. When she applied for admission the following year, she was refused, but was finally graduated from the Western Reserve College at Cleveland. Referring to the incident Dr. Charles Warrington Earle wrote: "The Illinois Medical Society saturated with the then prevailing prejudices against female medical education censured the Rush Medical College for admitting women to the lectures."

<sup>11</sup> The material which follows is taken largely from the history of the Woman's Medical College prepared by Dr. Marie Mergler who was at one time its Dean.



tered the college: Dr. Thompson, Julia A. Cole and Augusta Kent. At the end of the year, Dr. Thompson received her diploma, the only woman to receive a diploma from the Chicago Medical College. Miss Cole and Miss Kent successfully passed their junior and part of their middle year studies when the doors of the school were suddenly closed to further admission of women students. Again Dr. Earle wrote: "Although the relations of the ladies and gentlemen students had always been dignified and respectful, the male members of the class, at the close of the college year, sent to the Faculty a formal protest against the admission of their fair visitors, claiming that certain clinical material was not as ready in coming forward and that certain facts and observations of value were omitted from the lectures in the presence of a mixed class."

This defeat was a blessing in disguise. For some time, plans for a school exclusively dedicated to medical instruction to women students had been dormant in Dr. Byford's mind. These now sprang to life. According to an Alumnae report: "Dr. Byford called a meeting to be held in his office on August 2, 1870, to discuss the expediency of founding a medical college for women exclusively." Present at this meeting were Drs. Mary Thompson, Charles W. Earle, Norman Bridge, and Dr. and Mrs. Dyas. A Committee on Organization was appointed, which created a Board of Trustees composed of men and women friendly to women in medicine. To secure a faculty must have been an almost Herculean task at a time when "it was almost a disgrace to be seen walking on the street with a woman doctor to say nothing of the enormity of showing her a kindness." There were no funds nor appliances, a condition not likely to inspire a teacher with enthusiasm. However, Dr. Byford succeeded in securing an excellent corps of professors, several of whom were already connected with the Hospital for Women and Children. The school was called The Woman's Hospital Medical College, a name it carried until the year 1879 when the word "hospital" was dropped.

The first regular course of lectures was delivered in the parlors and dispensary of the hospital, and the dissecting room was a loft, reached by four flights of stairs, in an old building by the river. But to the enthusiasts this did not matter, and Dr. Addison Foster was an excellent demonstrator and a sincere friend of the medical students. The school opened with 17 matriculants, and the session was considered a real success.

The second term opened on October 3, 1871, in rooms which had been fitted up at 1 and 2 North Clark Street, near the hospital. The great Chicago fire swept away the hospital, the college, and the homes, offices and libraries of three-fourths of the faculty. Not daunted by this calamity, on the following day—October 10, 1871—the Faculty decided that the school should go on. The hospital had been established at 600 West Adams Street and the

school was moved to 400 West Adams Street, where lectures at once were resumed.

In 1872, the hospital received a grant of \$25,000 from the Relief and Aid Society for medical and surgical services rendered during the years and was thereby able to erect its own building at the corner of Adams and Paulina Streets. On its rear lot was a little barn, the use of which was gratuitously granted to the college. An expenditure of \$3000 converted this barn into a moderately well equipped building, with a small lecture room on the first floor and dissection rooms on the second floor. Dr. Marie J. Mergler wrote: "Although the accommodations were scant and facilities inadequate, the classes were intelligent and many of those graduates have obtained honorable and lucrative practices, bringing credit upon the institution."

The faculty for 1873-74 consisted of some of the most eminent professors in the city and is given here in full:

W. Godfrey Dyas, M.D., Professor of Theory and Practice of Medicine  
 A. Fisher, M.D., Professor Emeritus of Surgery  
 T. Davis Fitch, M.D., Secretary and Professor of Diseases of Women  
 Roswell G. Bogue, M.D., Treasurer and Professor of Surgery  
 Eugene Marguerat, M.D., Professor of Obstetrics  
 Charles Gilman Smith, M.D., Professor of Hygiene, Clinical Obstetrics and Diseases of Women  
 S. C. Blake, M.D., Professor of Diseases of the Mind and Nervous System  
 G. C. Paoli, M.D., Professor of Materia Medica and Therapeutics  
 Samuel A. McWilliams, M.D., Professor of Anatomy  
 Charles W. Earle, M.D., Professor of Physiology  
 Addison H. Foster, M.D., Professor of Surgical Anatomy and Operations in Surgery  
 M. Delafontaine, Ph.D., Professor of Chemistry  
 Peter S. McDonald, M.D., Demonstrator of Anatomy

These faculty members not only gave their time and shared the many trials which presented themselves during these early years, but they also assumed financial risks, and were not spared unpopularity and even ridicule from their colleagues. But the school prospered, attendance increased, and the "little barn" became inadequate for the growing demands.

At great financial risk, a building at 337 South Lincoln Street was purchased, which was in the medical center of the west side of the city. This was converted into a complete college building with two amphitheatres, a well equipped chemical laboratory and a convenient, well lighted dissecting room. Several members of the faculty resigned because of this venture, their reasons being that the college was not yet self-sustaining and its future was still uncertain. Dr. Byford took great pride in the step, however, and Drs. Earle, Dyas and Fitch remained faithful to him. The new faculty for 1877-78 was as follows:

William H. Byford, M.D., President and Professor of Obstetrics  
T. Davis Fitch, M.D., Secretary and Professor of Gynecology  
Charles W. Earle, M.D., Treasurer and Professor of Diseases of Children  
Isaac Newton Danforth, M.D., Professor of Pathology  
John E. Owens, M.D., Professor of Surgery  
Henry M. Lyman, M.D., Professor of Theory and Practice of Medicine  
Daniel R. Brower, M.D., Professor of Nervous Diseases  
Sarah Hackett Stevenson, M.D., Corresponding Secretary and Professor of  
Physiology  
David W. Graham, M.D., Professor of Anatomy  
Plymman S. Hayes, M.D., Professor of Chemistry

Dr. Thompson, who for years had been a member of the college staff as Professor of Clinical Obstetrics and Diseases of Women, confined her teachings during later years to clinical instruction in obstetrics and gynecologic surgery to the hospital clinics.

Although the institution had gradually attained a high standing among the medical colleges of Chicago, its senior class had never had an invitation to take part in the much coveted competitive examinations for internships at the Cook County Hospital. Dr. Mergler recorded this situation as follows: "About two weeks before the close of the term in the spring of 1879, we five seniors, Kate C. Bushnell, Marie J. Mergler, Agnes McMahon, Julia M. McGowan, Catherine Brannen Slater, were surprised to find a notice on the board inviting us to take part in the examinations held at Cook County Hospital. At first we thought it was out of the question. We had no equal chance with other schools, especially in surgery, for we had not gone over half the ground. The faculty as a whole did not encourage us. To go or not to go, that was the question. Not to go meant that we should perhaps never be asked again. To go meant to fail. We decided to go if only to show how little we had been taught in surgery. Our Professor in Surgery, who reluctantly had gone on the staff, told us in his introductory lecture he did believe in 'female doctors,' and he spent more time and emphasis in dwelling upon the uselessness of teaching surgery to women than on the topic of his chair. We went!

"The examination took place at 8 P.M. On our arrival at the hospital no one seemed willing to show us the examining room. Finally someone escorted us to the amphitheater. This was filled with a crowd of students and spectators who received us with deafening shouts and hisses. They clapped, whistled and stamped. They cried 'Pass 'em up,' and we sat down. Finally came the Chairman of the staff and the Secretary. The Chairman looked daggers at us and inquiringly at the Secretary: 'You instructed me to notify the regular colleges, sir, and the Woman's College is a regular college, so I invited them.' It was Professor W. E. Quine who opened the door to us.



"The examination was oral and fair in most of the departments. The gynecologist and the obstetrician tried to get us off balance by making vulgar jokes. The surgeon tried to wreck us. We faced things as best we could, but, of course, did not receive an appointment. But one point we did gain. We made our surgeon feel ashamed of his work and made him turn over a new leaf. A subsequent memorable interview with him resulted in his saying: 'I'll give you bare surgery.' He was an excellent surgeon and a fine teacher and all of the next year he delivered splendid lectures. When the class of 1881 came up, no one was more interested than he to have them stand well. He resigned but ever since has been a warm friend of the cause. A few days later through the earnest efforts of Professor D. R. Brower we were invited to come up for examination for interns at Dunning. Three appointments were to be made. The examining committee consisted of two professors of each college and two who were supposed to be disinterested members. The examinations extended over two evenings, one oral and one written. For the oral examination we met in Dr. Jewell's office. The young men felt sure of the victory, but the tables had turned. The Woman's College was ahead this time, and after the oral examination the boys looked quite crestfallen. Privately we were informed that the Woman's College stood first, but in the recommendation to the commissioners they gave it the second appointment. The expected confirmation by the commissioners never took place. A young man from St. Louis, a brother-in-law of one of the disinterested members of the Board, was put on without an examination! Now we were told there is no use of trying again. A woman will never be appointed, but for all that some of the middle year students determined to prepare for the coming examination.

"Dr. Mary E. Bates, then not quite 21 years old, was notified that she had passed for the position of intern in Cook County Hospital! Of course, the joy was great, but then came the dread of a woman being able to succeed in the face of an attending staff, who as a whole did not believe in a woman for that place." Dr. Mergler quoted one of the professors as saying: "She never would venture to go on duty if she knew what was before her. It is her youthful ignorance which gives her courage." However, the fame she justly won speaks for itself.

In the year 1885, Dr. Carrie Brewer received the appointment as alternate. In 1886, Dr. Rose Talbot passed for alternate, and in 1887, Dr. Rachel Hickey received the appointment as intern. In 1888, two of the students of the Woman's College came up for the Cook County examinations and both of the women received appointments, Dr. Jeanette Kearsley as intern and Dr. Helen Gilman as alternate.

In the year 1889, there were two competitive examinations, one for positions in Cook County Hospital and one for the Illinois Eye and Ear Infir-

mary. There were 29 competitors, 5 women and 24 men. Out of these five women, Drs. Bertha E. Bush and Alice Piper won places as interns and Dr. May Fowler as alternate at the Cook County Hospital. Two women and three men competed for the appointments at the Eye and Ear Infirmary, and Dr. May Fowler was appointed as intern.

Dr. Mergler closed her remarks about these competitive examinations by saying: "We believe that nothing in the entire history of the College has been so conducive to the high rank which it holds today as the persistent efforts on the part of the students to be given an opportunity to fairly and squarely test their ability by entering into the competitive examinations and by insisting on equal privileges with the men in holding positions in their public institutions. No woman studying medicine today will ever know how much it has cost the individuals who were personally concerned in bringing about these changes; how eagerly they have watched the new developments and mourned over each defeat and rejoiced with each success, for with them it meant much more than success or failure for the individual; it meant the failure or success of a grand cause."

The standing of the college improved with the years. It could easily hold its own with the best colleges in the city and, as its reputation rose, the attendance increased. The amphitheater could barely accommodate the 152 matriculants of the class of 1890; more and better equipped laboratories were needed, and the dispensary rooms were crowded. The school had at last become self-sustaining, and the demand for a new building was reasonable. It soon became a reality in the form of a 4-story building completed in 1890. This was an imposing edifice and faculty, alumnae and students were proud of it. It contained two amphitheatres, new laboratories, library, faculty rooms and modern conveniences. The old building, connecting directly with the new, was renovated and used chiefly for dispensary purposes. With the new building, teaching facilities improved greatly and attendance further increased. In 1894, its alumnae numbered 350.

The school came fully abreast of other medical institutions in its requirements for admission, as well as in the curriculum offered. Indeed, the opportunities for clinical instruction in obstetrics and gynecology were unequaled by any other school in the city. The students attended clinics regularly at the Women's and Children's Hospital and at the Woman's Hospital, popularly called Dr. Byford's hospital. Graduates also served their internships in these hospitals and, as the reputation of the school spread, other hospitals in the city accepted its graduates for internships.

In obstetrics, the Women's and Children's Hospital and the college had gradually built up large outpatient departments to which the students were admitted. Dr. Effa Davis established such a department, under the

auspices of the school, in the Hull House district, and the Lincoln Street Dispensary of the college was under the supervision of Dr. Eliza H. Root. In gynecology and surgical gynecology, the school provided abundant material and exceptional instruction under such outstanding operators and clinical teachers as Drs. Byford, Mary Thompson, Marie J. Mergler and Bertha van Hoosen. In children's diseases, the students had the advantage of the Children's Clinic at the Women's and Children's Hospital, as well as the valuable instruction of Dr. Earle, Professor of Pediatrics, in the steadily growing children's clinic at the college.

The school was proud of its pathological laboratory under the able direction of Dr. Veta Annette Latham. Dr. Christian Fenger, known as the father of modern pathological surgery and an internationally famous brain surgeon, was not on the staff of the college but he was a firm believer in the medical education of women. Annually in the late 1880's he held a competitive examination for the senior students of the college in pathological microscopy. The competitors met in the evening in his home office where microscopes and slides were ready. Following the examination he gave a most illuminating lecture on the pathologic specimens and their significance. The winning competitor won a prize of \$25.00.

Dr. Daniel R. Brower, Professor of Nervous Diseases, built up an excellent clinic and once a year conducted a clinic for the senior class at the Cook County Insane Asylum at Dunning.

Dr. E. Fletcher Ingals, Professor of Diseases of the Throat and Chest, with his associate, Dr. Edwin Rhodes, built up a large clinic in his department.

Dr. Bertha van Hoosen, graduate of Michigan University and demonstrator in embryology, had always been much interested in the school. Students were invited to attend the clinics at several hospitals and teaching institutions with which she was connected: Women's and Children's, Cook County and University Hospitals and Loyola University. Because she was an excellent teacher and a skillful operator, these clinics were of great educational value.

During the 1890's, great changes took place in the attitude of the medical profession and the laity towards women in medicine, in keeping with the trend of the times when women all over the world finally conquered intolerable prejudice and injustice and attained the right to enter any sphere of work on equal terms with men. It now seemed desirable for Northwestern University and the Woman's Medical College to become united, and in 1891 the college was made a department of the University and assumed the name "Northwestern University Woman's Medical School." The announcement contained the following paragraph:

"During the year of 1891-92 the Woman's Medical School of Chicago became a part of the Northwestern University and is now under its control. It will here-



after be known as the Northwestern University Woman's Medical School. It is conducted as a regular school of medicine for the education of women only."

Dr. Byford, who had been so active in promoting this union, did not live to see its completion. The alliance lasted until 1902, when Northwestern University declared the school non-existent. Whatever the cause of this decision it could not have been due to any deterioration in the standing of the school. Possibly there were financial reasons. Matriculation of students had decreased slightly as all the regular medical colleges in the city had become co-educational.

It was a shock to the alumnae that their beloved Alma Mater had closed its doors forever. The younger generation in the large educational institutions will never know the close, friendly relationship existing in this smaller school where teachers and students struggled together and together won a great victory.

## OTHER MEDICAL SCHOOLS IN ILLINOIS ESTABLISHED DURING THE 19TH CENTURY<sup>12</sup>

By OTTO F. KAMPMEIER, PH.D., M.D.

IN his report on medical education in the United States and Canada, Flexner<sup>13</sup> recorded that between 1810 and 1840, twenty-six new medical schools were founded in these two countries; between 1840 and 1876, forty-seven more, and that the number actually surviving in 1876 more than doubled since then. The United States and Canada in a little more than a century produced 457 medical schools, many of which were short-lived and perhaps 50 were stillborn, while 155 survived in 1910. Illinois was the "prolific mother of 39 medical colleges and still harbors in the City of Chicago, 14." Not long after Flexner wrote these words in 1910, the number of survivors diminished to less than half, and most of the original 39 in Illinois had closed their doors before the turn of the century.

Some of these institutions were inferior in their ideals, motives, aims and performance at their beginning; some were even fraudulent, while others in their conception vied with the best of the present survivors and suc-

<sup>12</sup> This material has been transposed and extracted from the monograph on medical libraries in Illinois which Dr. Kampmeier contributed for this volume.—*Editor*

<sup>13</sup> Flexner, Abraham: *Medical Education in the United States and Canada. Carnegie Foundation Report, Bulletin 4*, New York City, 1910.

cumbed in the struggle of competition only because of an adverse sequence of circumstances, unfavorable location, financial difficulties or because of the clash or the deficient force of personalities.

In point of origin, *Hahnemann Medical College and Hospital*<sup>14</sup> was the second school of medicine in Chicago, being incorporated in 1855 by the pioneer in homeopathic practice in the city, Dr. David S. Smith, in protest against Rush Medical College which refused admission to all students suspected of any leanings towards Hahnemannian doctrines. Smith, with the help of Hon. Norman B. Judd and Hon. Thomas Hoyne, proceeded to the law office of Abraham Lincoln where the charter was drafted and written. Owing to ill health, Dr. Smith failed to push the establishment of the College, which was held in abeyance until 1859-60, when at a meeting of homeopathic physicians in Chicago, a faculty was organized and nominated. During the first eight years, the course of lectures at the Hahnemann Medical College was given at 168 South Clark Street over the pharmacy of Halsey and King. In 1868, the college removed to 1237 State Street, between 12th and 14th Streets, where it occupied the upper stories of a tall brick building, the lower portion of which was utilized as a vinegar factory. Evidently the odors emanating from above were incompatible with those produced by the occupants below, for an item in the college catalogue records the dean's report of notification that "the rooms now occupied by the college would not be rented again for college purposes if dissecting rooms were to be connected with it." A renewal of the lease was obtained upon the pledge of the faculty "that no offensive smell should in future annoy the neighbors."

In June 1870, the cornerstone of the building that was intended to be the permanent home of Hahnemann Medical College was laid on Cottage Grove Avenue near 28th Street. When completed and ready for occupancy in the following October, the edifice was "the best college building west of the Allegheny Mts." The prospects for the future were bright, and the policies of the school were liberal, for it was among the first institutions admitting women students on equal terms with men, and its work of instruction was good. But almost immediately its faculty was torn with dissensions which led, in June 1876, to the incorporation of the *Chicago Homeopathic Medical College*, while Hahnemann Medical College was reorganized with a smaller faculty.

The Chicago Homeopathic Medical College in the catalogue of its 17th session (1892-93) described its building as a large, substantial edifice, erected

<sup>14</sup> In Volume 1, pages 239-256, Dr. Zeuch devoted a chapter to homeopathy, covering the period up to and including the 1850's. Dr. Kampmeier here continues the history, giving special consideration to the colleges and hospitals of the Hahnemann system.—  
*Editor*

in 1881, on the corner of Wood and York Streets, in the midst of the great hospital and college district of Chicago, and as "the most complete devoted to the teaching of Homeopathy in this country," with a large amphitheater, two large dissecting rooms, and an extensive anatomical museum. A new addition to its laboratory building was erected in 1894.

In Flexner's uncompromising report of 1910, "The city of Chicago is in respect to medical education the plague spot of the country," for though the State Law was fairly adequate, all of its dozen and more medical schools, except Rush Medical College, Northwestern University Medical School and the College of Physicians and Surgeons of the University of Illinois, prepared candidates for the state board examinations in unmistakable contravention of the law and the state board regulations. Such practices occurred continuously throughout several decades prior to 1910, and the case of Mrs. Sarah C. Harris may be cited only as one example of the flagrant violations of the law by many medical schools of those times. A diploma had been granted her by Hahnemann Medical College after a single course of lectures, after which she practiced medicine more than five years, and then was recommended for the degree by a reputable physician. In justification of its action, Hahnemann Medical College stated that five years of practice were considered the equivalent of the required courses of lectures and that the degree was regarded merely as an honorary one. After reprimanding this college, the State Board of Health reaffirmed its good standing.

It was due in part to such practices, in part to claims and appointments which were unfounded, and to other vainglorious boasting, hiding a spurious façade of prosperity, that many medical schools drew a large number of students and lived long beyond the day when they should have ceased to exist. Hahnemann Medical College tore down its old building and laid the cornerstone of a new and more pretentious one on the same site in August 1892. (The further course of this college was fluctuating; in 1904, it reabsorbed the Chicago Homeopathic Medical College and its library, and in 1922 it was taken over by the *General Medical College* which in turn closed its doors in 1924.)<sup>15</sup>

*Bennett College of Eclectic Medicine and Surgery*,<sup>16</sup> which was organized in 1868, had an equally checkered career. According to the 4th annual announcement of 1871-72, it was at first located at 180-182 Washington

<sup>15</sup> On file at the Crerar Library are several volumes of notes and data pertaining to the later years of the homeopathic institutions of Chicago.—*Editor*

<sup>16</sup> Dr. R. M. Strong, Professor Emeritus of Anatomy, Loyola University, has prepared a complete history of the Stritch School of Medicine of Loyola University, together with historical data on Bennett College, including illustrations. Since the material Dr. Strong presents deals almost entirely with events later than 1900, the manuscript has been filed at the Crerar Library where it may be studied on request.—*Editor*



Street, in a "4-story marble structure, having spacious, light and well-ventilated lecture rooms, amphitheater, operating theater, museum, etc." It also had the beginnings of a library, established in 1869. In 1873-74, the 6th annual catalogue announced that the college was located at 461 Clark Street and that its entire property "real and personal is owned by the faculty, in about equal proportions, and not, as in the case of some other medical colleges, by *one* man, to whom the balance of the faculty must look for their *opinions* as well as their *positions*." Much of the catalogue constituted propaganda, reviewing the different systems of medicine, giving advice to the public, and recommending the college to prospective students since "the system of practice taught is *genuinely Eclectic*, embracing every remedy and measure of real worth known to medical men."

The 27th annual catalogue (1894-95) announced the location of Bennett College in a new building at the corner of Ada and Fulton Streets, two blocks north of Lake Street.

Until 1909, this college "was an eclectic school," and then assumed the title Bennett Medical College, an institution described by Flexner in 1910 as "frankly commercial" and as being "a stock company, practically owned by the dean." The college had come into evil days, for its school building was in a wretched condition, a badly-kept room devoted to anatomy "contained a few cadavers as dry as leather," and its clinical facilities were in keeping. It tried to rehabilitate itself by absorbing the *Illinois Medical College* and the *Reliance Medical College*, and in the same year (March 1910) became affiliated with Loyola University as its medical department. (Illinois Medical College, organized in 1894, and Reliance Medical College, organized in 1907, represented actually a "day" and a "night shift" of a single institution owned by its president.) Two years later Loyola University purchased and absorbed the *Chicago College of Medicine and Surgery* which had been organized in 1901 as the "American College of Medicine and Surgery (Chicago Eclectic Medical College)." In 1905, it renounced eclecticism, assumed the above title in 1907, and in 1911 took in the *College of Medicine and Surgery: Physio-Medical*. This latter institution began in 1885 as the "Chicago Physio-Medical Institute" and in 1891 became the "Chicago Physio-Medical College" (then located at 605 West Van Buren Street), whose annual announcement was largely devoted to the propagation of its doctrines and smacked of quackery in its explanation of vital force and "physio-medicalism" and in its claim that "the student will be shown the beginnings of things" and that the leaders of this system of medicine "are not men but the immutable laws of Nature." In 1899, the school merged with the Chicago College of Medicine and Surgery: Physio-Medical, which had come into being two years before, and in 1908 a similar school in Dallas, Texas, combined with it.

The *Quincy College of Medicine*, or medical department of Chaddock College at Quincy, Illinois, which began in 1882, was reorganized in 1888, assuming the name of Chaddock School of Medicine, and became extinct in 1890.

Typical of the vaunting which characterized the annual announcements of most second- and third-rate schools was that of the *National Homeopathic Medical College* which existed in Chicago between 1891 and 1914. This institution began at 541 North Halsted Street and had a perambulating disposition in more points than one: in its second year it was located at 571 Clybourn Avenue, and in its fifth year (1895-96) at 272 East Erie Street in a "spacious stone-front double mansion," and the prospectus still lauded the spread of homeopathy. But in the same year the word "homeopathic" was dropped and the title became "National Medical College," with the addition "and Hospital" in the following year. In 1898, the Board of Directors of the college "were compelled, because of its phenomenal growth, to seek larger and better quarters, now at No. 531-533 Wells Street, with an ideal amphitheater capable of seating more than 500 students." In the same year, night classes were formed, presaging the medical department of the "Chicago Night University," with which it affiliated in 1906. In 1900, the name changed to "National Medical University," so as "to include seven colleges or departments; namely, medical, dental, pharmacal, sanitary, obstetrical, osteopathic and veterinary." The annual announcement stated further that it "now teaches the different systems of medicine," for when such "are taught under the same auspices, a favorable opportunity is given for a fair comparison." It also boasted of "five well-equipped laboratories," and a rebuilt anatomical laboratory, refilled with modern equipment, and well-ventilated and attractive "so that the student may spend hours dissecting continuously without impairing his health." This scene is different from that described by Flexner several years later who found that there was only didactic teaching and that "persistent inquiry for the dissecting room" was finally "rewarded by the sight of a dirty, unused, and almost inaccessible room containing a putrid corpse, several of the members of which had been hacked off." Whatever microscopes existed were locked up in a storeroom, and there was "no pretense of anything else." The college was in trouble with the State Board of Health at various times, and in 1909 that body declared it was not in good standing, suspended it, and in 1914 revoked its charter.

The *Hering Medical College* was organized in 1892 to teach homeopathy in its original purity. It, too, led a peripatetic existence, for in its first year it was located at 2-4 College Place at the corner of Cottage Grove Avenue where Dr. Carrie Shaw supervised the work in the "Ladies Dissecting Room," in the second year at the corner of 22nd Street and Indiana Avenue,

and in the third year (1894-95) in "the very heart of Hyde Park, four blocks west of the 60th Street entrance of the late World Fair Grounds, one block south of Midway Plaisance and about two blocks southeast of the great Chicago University"—a situation which "is without doubt the most delightfully situated of the medical colleges in Chicago." In 1901-02, it was located at 3832-34 Rhodes Avenue in an edifice which represented "the very best in modern college architecture."

In the same year, Hering Medical College absorbed the *Dunham Medical College*, which was organized in 1895 in the belief "that the Art of Healing as taught by Samuel Hahnemann" was the "most rational and scientific yet discovered" and thus adopted "the Organon as its Therapeutic Guide."

In 1913, after a decade of apparently precarious existence, the combined Hering and Dunham Medical Colleges, were absorbed by the *Chicago Hospital College of Medicine*. Four years later this newly established school absorbed the *Jenner Medical College* which had been organized in 1892 as the "Harvard Medical College" a night school and frankly a commercial enterprise. It taught its students by quiz-compend drills with the aim of passing the written examinations given by the State Board of 1896.

The *American Medical Missionary College* was organized in 1895 in connection with the Sanitarium at Battle Creek, with the aim to prepare its students for medical missionary work. It gave "particular attention to therapeutics and practical training in the use of massage, electricity, hydrotherapy and other natural and physiological measures." The institution became extinct in 1910.

Having mentioned some of the better known discontinued medical schools in Illinois, the writer is led, for the sake of attempted completeness, to name here also the more obscure and ephemeral institutions, and those of more fraudulent nature. One of the earliest of these was the *Chicago Northwestern College*, which was incorporated in 1862, became *Edinburg University of Chicago* in 1870, was exposed in the eighties as a fraud by the Illinois State Board of Health and since then has been defunct.

One institution which lasted somewhat longer and had capable teachers on its staff was the night school, *Harvey Medical College*, chartered in 1891 and becoming extinct in 1905.

There was also a series of medical schools started or chartered between 1889 and 1900, such as the *Metropolitan Medical College*, which were closed by court injunction or by the postal authorities. A counterpart was the series of chartered ventures initiated in Chicago in 1891-92 by Johann Malok which never functioned.



## CHAPTER XXII

# MEDICAL LIBRARIES IN ILLINOIS PRECEDING 1900\*

BY OTTO F. KAMPMEIER, PH.D., M.D.

THE preëminent part medical men played in the colonization of Illinois, often as leaders, has been told by Zeuch in Volume I of this series. It can hardly be expected that the pioneer doctors burdened themselves with many books yet there is no doubt that the most studious among them came with as many as their saddlebags would hold. As the settlements along the water courses—the Ohio, the Mississippi and the Wabash that bounded the Illinois Country—grew and the river traffic increased correspondingly, especially with the coming of the steamboat, the cargoes of barrels and boxes and baggage unquestionably contained also books, many of them probably medical in nature. However, the lecture in medical schools retained its authoritative character. As the dominant mode of transmitting knowledge, along with the catechismal quiz, the tradition of the lecture had become so firmly entrenched in the curriculum of the medical schools that almost all students and practitioners relied wholly on the pronouncements of their teachers and found little incentive to hunt for information in the published material in journals. This mental inertia doubtlessly was the principal factor in the late appearance of the public medical library. Not until the 1890's did the movement for the establishment of such libraries become active and widespread and gain momentum in the United States.<sup>1, 2</sup> Before 1880 or 1890, those physicians who were eager to dip deeply into the past of their art and science and to keep abreast of its most recent contributions throughout the world, made their homes storehouses of medical literature to the measure of their financial ability. In most cases these private collections were later to become the nuclei of the public medical libraries. Any words of appreciation, therefore, that the present generation of research men, practitioners, students

\* Extracted freely from the 200-page monograph *A History of Medical Libraries in Illinois Prior to 1900* (unpublished).—Editor

<sup>1</sup> Huntington, Albert T.: The medical library movement in the United States, *Med. Lib. and Hist. J.*, Vol. 2, 1904.

<sup>2</sup> Fisher, Charles P.: Medical libraries, medical publishers and the medical profession, *Med. Lib. and Hist. J.*, Vol. 2, 1904.

and historians may utter can never express in full the debt they owe to those original collectors.

Publication of medical textbooks in the United States by American authors hardly began before 1800. Imported European works or American editions of them comprised the sole medical literature at that time. When considering the medical books that may have been in circulation in Illinois during the early part of the 19th century, one cannot ignore the "domestic medicine books" which were widely used, especially in the rural districts where a doctor was called only in case of dire need.

#### PRIVATE MEDICAL LIBRARIES IN ILLINOIS PRIOR TO 1850.

When pecuniary reverses in 1829 caused *Dr. Elijah Dewey Harmon* at the age of 47 to leave Vermont for the West, no thought would have seemed more preposterous to him than that some day he would be called the "Father of Medicine in Chicago."<sup>3</sup> However, during that year he spent several months in Jacksonville, Illinois, seeking a suitable locality in the state in which to begin practice anew. In 1830, he was installed at Fort Dearborn to look after the health of the two companies of soldiers who constituted the garrison, and in June 1831, his family joined him, bringing with them from Vermont his stock of medicines and his cherished medical library of more than 100 volumes. In 1833 he gave up entirely his military career to devote himself to private practice. He had secured the famous Kinzie House as a residence for his family and himself and as a place for his office, library and store of medicines. It may never be known just what books comprised Dr. Harmon's library because of the likelihood that it was entirely lost in the Chicago fire soon after his death in 1869, especially since there is the statement of one of his sons that most of the family documents were destroyed during that conflagration, among them "the diploma of the University which conferred upon the doctor his degree of medicine."

When *Dr. Thomas Hall* at the age of 32 settled in what is now Stark County, Illinois, in 1837, "he brought with him a library of choice medical works and surgical instruments of the most approved pattern then known to meet every emergency."<sup>4</sup>

*Dr. Alfred Castle*, a contemporary of Dr. Hall in Stark County, arrived in Stark County in 1842. Like Dr. Hall, Dr. Castle brought with him a well-selected medical library.<sup>4</sup>

*Dr. Joseph C. Frye* was a familiar figure on the streets and in the homes of Peoria from 1834 to 1887. Though he did not contribute to medical literature, no new work of value came to his attention but it must be added

<sup>3</sup> Hyde, James Nevins: *Early Medical Chicago*. Fergus Printing Co., Chicago, 1879.

<sup>4</sup> Stark County, Illinois: *Documents and Biography pertaining to its Settlement and Progress*. M. A. Leeson & Co., Chicago, 1887.

to his library which, when he died in 1887, represented one of the best collections of medical treatises in the state.<sup>4</sup>

Dr. Oliver Everett<sup>5</sup> lived and labored in Dixon, Illinois, from 1836 until his death in 1888. He was an accurate observer; his knowledge of botany, geology and paleontology became profound, and in later years he was frequently consulted in reference to these subjects by authors of worldwide reputation. He furnished many paleontological specimens to illustrate the volumes of the Illinois Geological Survey. He spent many hours in expanding, preparing, classifying and labelling his various collections, and in the development and growth of this library he spared no expense.

Dr. Valentine A. Boyer came to Chicago in 1836, bringing with him what was said to have been then its finest medical library; he had assembled it at considerable cost and took great pride in it. The Chicago fire wiped out his medical library and all of his other belongings.

#### MEDICAL LIBRARIES CONNECTED WITH EDUCATIONAL INSTITUTIONS

1. *Illinois College at Jacksonville.*—The medical school at Jacksonville, though short lived (1843–1848), left a deep impress on the medical history of Illinois. In its first catalogue, issued in 1843, it is announced that “there is a respectable medical library belonging to this Institution, embracing the best modern works upon the various branches of medicine. Students will also have access to the private libraries of the Professors, which contain the best medical periodicals in the French, German and English languages.” Further “it is recommended that each student provide himself with a medical dictionary; and some good modern work on each of the branches which he wishes to pursue in connection with the lectures.”

With the closing of the doors of the medical department of Illinois College in 1848, the fate of its library, for the growth of which much money and energy had been spent, assumed an increased interest. Contrary to what usually happens to a virtually abandoned collection of that kind, the course of this one is fairly clear. For almost half a century it remained “stored away in dusty uselessness,” as Dr. Black remarked,<sup>6</sup> “in the old library in ‘Beecher Hall.’” Then to make it serviceable “for physicians and students, it was turned over to the Morgan County Medical Society.” This transfer, after a proper exchange of formalities, is revealed by the minutes of the meeting of the Society in June 1894. We learn further that this medical library, which contained “many very old books, valuable historically and as book rarities, a number of them in Latin, was placed in the Library of the County Society, in trust.” No record was found of the number of volumes transferred.

<sup>5</sup> Illinois State Medical Society. *Transactions*, 1850–1900.

<sup>6</sup> Black, Carl E.: *The Morgan County Medical Society, 1867–1917*. Jacksonville, Illinois, 1917.



During the succeeding 47 years, this collection of old medical books from Illinois College remained an integral part of the growing library of the Morgan County Medical Society. Throughout the greater extent of that period, its library was housed in the Carnegie Public Library Building in Jacksonville. Eventually the question of space became acute. To preserve for posterity the beautiful old volumes—"surgeries, early medical treatises, botanies, and herbals"—the major portion of the library of the Morgan County Medical Society was donated to the American College of Surgeons Library in Chicago.<sup>7</sup> By the end of 1905, there were nearly 1800 books, all of them properly "accessioned, catalogued, plated, labeled and shelved." Presumably many, if not most, of the older works among them originally belonged to the medical department of Illinois College. The oldest item among them is the "*Idea Machinae Humanae Anatomico-Physiologica ad Observationes Recentiores*" by Johannes Moritz Hoffmann, published in 1703.

That care was given to the upkeep and effectiveness of these books in the library of Illinois College is indicated by the rules pasted in the front of each saying: "This book may be retained . . . . week. If kept longer without renewal, a fine of 2 cents a day must be paid to the librarian. If lost or injured, the price of the book must be paid."

2. *Rush Medical College.*—The annual Rush Medical College catalogue for the 1847-48 session has only one sentence about a library:<sup>8</sup> "The College Library will be largely extended during the year." However, thereafter during the first 50 years of its existence, the college announcements offer no information about the state of its library. Indeed, the statements in the 1897 issue of *The Corpuscle*, the students' publication at the College, show that a usable reference library was non-existent there even at that date. Rush Medical College was swept into the stream of the revolution of thinking about medical libraries which set in towards the end of the century, for the 1891-92 catalogue stated: "The late Professor J. Adams Allen donated his large and valuable library to the Presbyterian Hospital for the special service of the staff. It may be used, by the permission of the superintendent, for reference by members of the profession and by students of the College." But despite the provisions in his bequest, his library evidently did not become available to students, for in a "Symposium on a Student's Library" in the March 1897 issue of *The Corpuscle*, John Robison wrote: "The idea of having a library accessible to the students is a very good one. Our revered president, Prof. J. Adams Allen, must have had this in view when he bequeathed his large library to the Presbyterian Hospital, but

<sup>7</sup> Library of the Morgan County (Illinois) Medical Society, *Bull. A.C.S.* vol. 26, p. 219, 1941.

<sup>8</sup> Annual Announcements of Rush Medical College, 1843-1900.

so far as it being of any benefit to the students is concerned, it might as well be located in Iceland."

The agitation for a college library came from the students themselves and began with the plea expressed three months earlier (January 1897): "Why can't Rush have a library? A few hundred dollars a year devoted to medical literature would give us, in a short time a fair start. Charge each student a dollar, or two dollars, or five dollars, if necessary, as a library fee; he can well afford it. Whatever the plan, let us have the books."

In the discussions which followed immediately in subsequent issues of *The Corpuscle*, most opinions strongly favored a central college library. Dr. J. H. Etheridge, however, was frankly dubious about the value of such a library, saying it would be useful to seniors of Rush Medical College but impracticable for the rank and file of students, while Dr. E. Fletcher Ingals wrote: "With the enormous amount of work now crowded into the curriculum, it is impossible for many students to do much outside reading." The most effective champion of the students for the establishment of a reference library at Rush Medical College was Dr. Ludvig Hektoen. In the April 1897 number of *The Corpuscle*, Dr. E. L. Kenyon stated: "More than ordinary praise is due Professor Hektoen for inaugurating the plan of departmental libraries. This system which is proving of such value in our literary colleges, includes, ultimately, the establishment of a special collection of books in each department, to be used by the students under the guidance of their teachers." And several months later the following statement is found: "Starting with his own private library as a nucleus, Prof. Hektoen has, with the assistance of the College Faculty, built up a library of considerable importance."

That the efforts of Dr. Hektoen did not rest with the development of departmental libraries but envisioned the objective of their consolidation as a central reference library, became immediately apparent. In 1898, upon the affiliation of Rush Medical College with the University of Chicago, President William Rainey Harper became interested in the development of Rush,<sup>9</sup> and presided at many of the faculty meetings. At one of these meetings "he asked that every one present indicate what he thought was especially needed to improve working conditions at the College. When my turn came, I said, among other things, that there was a great need of a library, whereupon President Harper solemnly said 'Amen.'"

Thus the library began, and on March 15, 1899, the Students Library officially opened its doors with about 250 volumes from the Pathology

<sup>9</sup> Hektoen, Ludvig: Notations on the history of the Library of Rush Medical College. These notations were dictated by Dr. Hektoen to Miss Caroline Riechers, librarian at Rush from 1939 to 1953, in letter form on July 30, 1941, for the historical records of the library.

Laboratory and 75 current medical journals. In the same year, it seems, the library of the late Charles Warrington Earle, containing nearly 500 volumes, was purchased, and Dr. Henry M. Lyman, Professor of Medicine and the Dean of the College at that time, donated more than 400 volumes from his private library. There were other liberal donors, but Dr. Hektoen, the moving force at the start of the Rush Medical Library, was for a long time thereafter the most active member of the Library Committee. Together with the cooperation of its librarian, Miss MacAuliffe,<sup>10</sup> the progress and development of the library were guided.

3. *Northwestern University Medical School and the Woman's Medical College.*—As to the origin of the library of the Chicago Medical School (later to become Northwestern University Medical School), the information gleaned from the minutes of the faculty and the college catalogues is scanty during its earlier period. In 1860, the year following the opening of the school as the medical department of Lind University, the faculty passed a resolution "that Drs. Andrews and Hollister be a committee to the library to appoint a librarian to enforce the rules."<sup>11</sup> Within a year the library had about 700 volumes, and in the seventh annual announcement (1865-66) it is noted that there was "a library of nearly 1000 volumes. During the present year still further additions have been made to the Museum and the Library, and a Reading Room has been opened in connection with the latter, containing all the principal Medical Periodicals of the United States and some from Europe." However, in 1870, the faculty voted that those who had "deposited or donated books to the library" be allowed two weeks to withdraw the ones they wanted and that the rest should go to the library of the Chicago Medical Society.

A revival of interest in a library did not come until about ten years later. In 1883 the motion was made before the Alumni Association "to use money collected for the establishment of a physiological laboratory and for a library." Evidently the motion was carried for a library committee was appointed. The following year the library had 145 bound and 100 unbound items. During successive years little activity is recorded, and facilities did not soon improve. During the academic session of 1889-90, the library was moved "from ground floor to basement, from basement to attic and at last . . . domiciled in a former prosector's room adjoining the upper lecture room." These accommodations were so cramped that, at the recommendation of the Committee, unbound material was turned over to the Newberry Library. The college library continued to lead a roving existence and in

<sup>10</sup> Miss Catherine MacAuliffe died in 1939 after forty years of service.

<sup>11</sup> Carr, Elizabeth F.: The Archibald Church Library of Northwestern University Medical School. *Quart. Bull. Northw. Univ. Med. Sch.*, Chicago, Vol. 23, No. 2, p. 241, 1949.



1894 was temporarily housed in one of the store-rooms of the bacteriologic laboratory. By this time it was much in need of organization and cataloguing, and the Y.M.C.A. offered to take over the work of caring for it, provided the faculty helped them in finding space.<sup>11</sup>

It required thirty years for the college library, now designated as the "Alumni Library," to regain the status it had in 1865-66. The college catalogue for the session 1896 says: "The Alumni Library of about one thousand volumes, purchased by the students and donated by the late Drs. F. P. Peck and G. W. Jones, is conveniently located on the lower floor of Davis Hall. The library is open from 12 to 2 daily. . . . The gross profits on the sale of all college textbooks made at the clerk's office are devoted to the increase and care of this library." By 1901, the library had over 2500 bound volumes and "several thousand journals and pamphlets; had moved to the fourth floor (the one also occupied by the gymnasium) and was open from nine to five. Administration was still by a committee of alumni and students, and not by the school."<sup>11</sup>

The Woman's Medical College had been academically successful from the start. In 1896, a library was established at this school and received the name of "Earle Library," to honor the memory of Professor and Dean Earle who died three years before. According to the college catalogue,<sup>12</sup> the "library is in possession of a well-selected collection of books of reference. These volumes form the nucleus of a more complete library, to be augmented from time to time by gifts from various donors, as well as purchases and exchanges made under the direction of the University authorities."

4. *Quine Library of Medical Sciences of the Chicago Professional Schools of the University of Illinois.*—Soon after the death in 1892 of Dr. A. Reeves Jackson, a founder of the College of Physicians and Surgeons, "his widow donated to the college a small library of thirty books. No provision was made for the care of this gift and no use was made of it, and in two years the number of books was reduced to fifteen or twenty."<sup>13</sup> Students this year were apprized of the advantages of consulting the medical department of the Newberry Library. This allusion to the value of a medical library may be attributable to the influence of Dr. William E. Quine who had just been appointed dean of the faculty and who, during his 22 years in this post, had an abiding zeal in the upbuilding of the college library.<sup>14</sup> In

<sup>12</sup> Annual Announcements of the Woman's Hospital Medical College, 1870-1902. The only complete files of these circulars are in the Quine Library of the Medical Sciences, University of Illinois.

<sup>13</sup> *History of Medicine and Surgery and Physicians and Surgeons in Chicago*. Endorsed and published under the supervision of the Council of the Chicago Medical Society. Biographical Publ. Corp., Chicago, 1922.

<sup>14</sup> The library's original accession ledger records as the first entry "Common Sense Management of the Stomach," published by G. O. Drewey in 1875, and given by Dr. Quine.

the annual announcement for 1896, there is the first notice that the college owns "a reference library of several hundred volumes for the use of students," this library owing its foundation to "the gift to the college of the library of the late Professor A. Reeves Jackson" to which "has been added largely from time to time by contributions from members of the Faculty and other friends of the College."

Much valuable supplementary information about the beginnings of the library of the College of Physicians and Surgeons can be garnered from the student publication of those days, known as *The Plexus*. In its first issue in 1895, the students expressed appreciation for the efforts of Dr. Bayard Holmes toward the establishment of libraries in connection with medical schools, and especially for his work in building up a library at the College of Physicians and Surgeons of Chicago. Strongly supporting the effort of Dr. Holmes is the thought-provoking essay on "The Man of One Book" by Dr. Quine in the same issue.

In the forefront of those who continued making valuable gifts to the library was Dr. Quine. In 1898, he contributed a large collection of books consisting of 2000 periodicals and 200 separate volumes. He also endowed the library at this period with three hundred dollars annually and paid the librarian out of his own pocket.

The annual college catalogue of 1898-99 announced that the library "has been formally named by the Faculty the Quine Library as a mark of appreciation of the numerous and valuable additions made to it by the Dean of the Medical School and of his services to medical education. Professor Quine has ensured its permanency and continuous growth."

5. *Bio-Medical Library of the University of Chicago*.—It is probably safe to assume that the nucleus of the Bio-Medical Library was formed by assembling the books on biology in the "old" University of Chicago<sup>15</sup> at the time of the reorganization in a new university, which opened its doors on October 1, 1892. At that time the Library was located in Room 8-B of Cobb Hall. In January 1893, the Library moved temporarily into the Gymnasium in Hutchinson Court. At this time the books which were found suitable for use of departmental libraries were so assigned, and accordingly the Biology Library came into being in Science Hall. The Administrative Board of Libraries, Laboratories and Museums ruled that each departmental library was to have "two attendants selected from the Graduate Scholars and Fellows of the Department," each to serve "the library two hours a day in arranging and cataloging old and new books, and in doing other necessary work connected with the library." The annual register of the University of Chicago in that year listed Frank R. Lillie and A. D.

<sup>15</sup> Driver, Ben C.: Personal communication, Jan. 21, 1952, from the librarian of the Bio-Medical Library of the University of Chicago, with enclosed annual reports to 1900.

Mead as library attendants. It also recorded that the Biology Library contained "a series of models and charts relating to embryological topics," and that it had "both monographs and periodicals" and that "the representation of current literature is particularly complete."

In 1896, the libraries of the several biological departments were moved to the Zoology Building. At the end of the fiscal year 1898, the combined Biology Library had 7200 volumes and its Reading Room accommodated 24 readers.

#### PRIVATELY ENDOWED MEDICAL LIBRARIES

1. *Columbus Memorial Library*.— At about the time of the great Columbian Exposition in Chicago, Mr. Henry Jewett Furber erected a pretentious office structure known as the Columbus Memorial Building opposite the Marshall Field Department Store on State Street. That building in the 1890's housed the offices of the elite of Chicago's medical profession. When the establishment of a medical laboratory in the building was proposed to Mr. Furber, he entered into the project with enthusiasm and lent the enterprise aid. Thus, the Columbus Medical Laboratory was founded in 1893. It may be assumed that the Columbus Memorial Library was part of the Columbus Medical Laboratory and that it had its start at the same time (1893), but it is not known whether the library was on the budget of that organization or whether it represented in part, at least, the personal book collections of its staff members, among whom were Drs. Adolph Gehrmann, William M. Harsha, John A. Wesener, William A. Evans and Ludvig Hektoen. The statement that Mr. Furber assisted the laboratory financially and that, after it was closed, he donated the Columbus Memorial Library to the College of Medicine of the University of Illinois, would indicate that he held ownership in it.

2. *Newberry Library*.— Mr. Walter Loomis Newberry, a successful business man and financier, was a founder in 1841 of the Young Men's Library Association which was the forerunner of the Chicago Public Library. His interest in its affairs probably influenced him in providing in his will for the Newberry Library. Thus far no printed history of the Newberry Library exists,<sup>16</sup> but according to the proceedings of the trustees of the Newberry Library, the story of the origin of its medical department is detailed in the following quotation:<sup>17</sup> "There never has existed in Chicago a medical reference library of any importance, and many fruitless attempts have been made to supply this essential need of the profession." The plan whereby

<sup>16</sup> Woodward, Gertrude L.: Personal communication August 19, 1952, from the custodian of the Rare Book Room of the Newberry Library, Chicago.

<sup>17</sup> The Newberry Library. *Proceedings of the Trustees, for the year ending Jan. 5, 1897*, Chicago. 1891.



the Chicago Public Library would house the collections of the Chicago Medical Society, the Medical Press Association and the Homeopathic Relief Association had failed, and "its promoters and the medical profession at large solicited the Trustees of the Newberry Library to accept as a gift the collections already made, and to assume the charge of creating a medical reference library with such cooperation as the profession could give. This responsibility the Trustees assumed and appointed a superintendent of the medical department. . . . A medical reference department to this Library has therefore been inaugurated. . . . A committee of eminent physicians and surgeons residing in the city, on invitation of the Trustees, have kindly consented to give their advice in the selection of books and serials for this department."

Three years later the superintendent of Newberry Library's medical department was able to give a glowing report of the magnitude in quantity and quality of its material. The phenomenal increase of size at its outset was largely brought about by the accretion of the "Jewell" and especially of the "Senn Collection."

In 1906, the medical department of the Newberry Library closed its doors with the transfer of its books to the custody of the John Crerar Library. When this collection was received from the Newberry Library it contained 28,432 volumes and 15,907 pamphlets accessioned, 979 duplicate volumes and 6,188 duplicate pamphlets. For the cost of these and other records, that library was partially reimbursed to the sum of \$68,544.

Transferred at the same time from the custody of Newberry Library by consent of the donor was the "Senn Collection." At this time it was stated to consist of 10,698 volumes and 14,501 pamphlets.

#### LIBRARIES OF COUNTY MEDICAL SOCIETIES

1. *Morgan County*.—There is no question that Jacksonville was the intellectual center of Illinois at the middle of the past century. Perhaps because of the influence of its college library, and certainly due to the initiative and force of David Prince, the Medical Society of Morgan County was, it seems, the first among the county medical societies of the state to establish a library for its members. At the meeting of this society in June 1872, Dr. Prince made the motion of appointing a committee "to consider the propriety of purchasing some Medical Periodicals for the use of its members," and at the meeting in the following month a list of 19 periodicals was presented.<sup>18, 19</sup> In the August meeting of 1872, it was arranged to keep

<sup>18</sup> It is of interest to note that after a lapse of twenty-five years, there were only three journals on the list which were considered of sufficient importance to be retained on the list in 1897, although the list then was expanded to thirty.

<sup>19</sup> Black, Carl E. (Editor): *The Journal of the Morgan County Medical Society*, 1900.

the journals on file at the Prince Sanitarium, and W. H. H. King, at that time associated with Dr. Prince, was the first librarian. It was during this period that Dr. Prince came in with an armful of books and, putting them in an empty bookcase, said: "That is the beginning of the Library of the Morgan County Medical Society."<sup>7</sup> This library was a collectors' library from the first.

In 1888, the Morgan County Medical Society appropriated \$100.00 from its funds for the purchase of new books. In the June meeting of 1894 occurred the transfer of the collection of medical books of the Illinois College Library to that of the county society. Towards the end of the century the library of Morgan County Medical Society was augmented by the receipt of parts of two private libraries: Dr. Azel Pierson of Augusta, and Dr. N. S. Read of Chandlerville.

The history of the library of the Morgan County Medical Society is an excellent portrayal of what a few forceful leaders, who have an intense interest in medical literature, can do in promoting the founding and growth of a public medical library.

2. *Cook County*.—The medical society in Cook County began to assemble a library for its members at about the same time as that of Morgan County, but the Great Fire of 1871 destroyed the volumes which had been collected. In 1889, the Chicago Medical Society organized the Medical Library Association of Chicago and collected "about 16,000 bound volumes." The history of this Association is best stated by Dr. Bayard Holmes:<sup>20</sup> "There was a committee of the Chicago Medical Society on 'A Medical Library,' and without solicitation on my part they put me on this committee. Chicago was then without any medical reading room or medical library. . . . After talking the matter over with Dr. Nathan Smith Davis, Dr. Hosmer Allen Johnson and Dr. Ephraim Ingals, we organized the Chicago Medical Library Association, got a charter and published our plan. It was our notion (to have) a meeting place for medical societies, a library and a medical club. . . . Reports of our progress were published from time to time when suddenly the whole project was terminated by the offer of the Newberry Library Trustees to take over the whole library portion of the project. . . . We had already bought the James S. Jewell library from the estate. Dr. Ludvig Hektoen and I had put up the money for this purchase before the Association had a cent in the treasury. Two Library Accession Books had been made for the Association. These and forty cases of books, estimated at 20,000 bound volumes and many reprints, were after due formality on the part of the Chicago Medical Society, the Chicago Public Library and the Chicago Medical Library Association turned over to the Newberry

<sup>20</sup> Holmes, Bayard: *Medical Libraries in Chicago*, *Med. Life*, vol. 31, 1924.

Library. The Chicago Medical Library Association came to an end. The records and papers of the Association were placed in the Chicago Historical Society's Collection, and the reports of Dr. Ephraim Ingals, the treasurer, were published in the 'North American Practitioner' together with a receipt from the Newberry Library trustees."

3. *Quincy Medical and Library Association*.—Dr. Edmund B. Montgomery of Quincy,<sup>21</sup> is the chief source of information about this Association, which was incorporated under the laws of Illinois on December 23, 1896 and finally dissolved in December 1908. There were 15 original members, of which only Dr. Montgomery and Dr. W. W. Williams are still living and Dr. Williams, "in the lapse of 43 years" had "forgotten all about the Society." Dr. Montgomery's letter stated that the books and journals acquired during the period of existence of the association amounted to 1830 bound volumes. This material, at the time of dissolution of this "reading club" was divided between the Quincy Public Library, Quincy College and Blessing Hospital. The proceedings of the association "were quite voluminous and are preserved in a volume of minutes kept in the Quincy Public Library, along with the catalog of books and date and source of acquisition."<sup>22</sup>

#### ACTION OF THE ILLINOIS STATE MEDICAL SOCIETY IN REGARD TO LIBRARIES

The first direct reference to a medical library by the Illinois State Medical Society was made in 1877<sup>5</sup> in Dr. James Nevins Hyde's speech of welcome in which he speaks of the Library of the Medical Press Association, which "is the nucleus of what we trust will one day become a flourishing institution." In 1885, at the 35th session of the Society, the following resolution was adopted: "a committee of three be appointed by the chair to report to the society at its next annual meeting on the wisdom and propriety as well as the best method of aiding any public medical libraries in the state." But

<sup>21</sup> At the time of this writing (1952), Dr. Montgomery was 94 years old and was still active. In 1951, he had been honored by the American Medical Association at its annual meeting as the oldest practicing physician in the United States. His gracious communication to the author was written in long hand.

<sup>22</sup> In a sense, a memento of the Quincy Medical and Library Association is deposited in the library of the American College of Surgeons in the form of a beautifully bound volume entitled *Surgery One Hundred Years Ago: an historical study*, written by the German surgeon, George Fischer. The original work, dedicated to the German Surgical Association and published, it seems, in 1878, was translated by Carl H. von Klein for the *Journal of the American Medical Association*, in which it appeared in excerpts during 1897 and 1898. Dr. Montgomery, appreciating highly its value, had a typewritten copy prepared and bound, with the names of the author, the translator and his own as compiler and bookmaker inscribed, and presented it to the American College of Surgeons some time between 1943 and 1945. Dr. Montgomery says that this work "is unique in that no such volume can possibly be published and its contents are worthy of preservation by the College."



it was not until the end of the 19th century that the leaven of incentive for the creation of public medical libraries began to ferment vigorously in men's minds. In 1890, Dr. Norman Bridge stressed the fact that Chicago, as a metropolis and a great center, must also be a center of learning and that the four factors which constitute a complete medical center are hospitals, medical schools, medical libraries and laboratories for the investigation of the medical sciences. He reviewed the recent action of the trustees of Newberry Library to create a medical department and predicted "that inside of a dozen years there will be in Chicago the largest and best medical library in the world, with the single exception of that at the National Capital."

In 1893, at the 43rd meeting of the State Society, Dr. E. Fletcher Ingals delivered his presidential address on "Aid to Medical Libraries," stating that "a good deal had already been done . . . by securing a number of small public collections of medical literature, when Newberry Library established a medical department."

In 1895, at the 45th meeting of the State Society, a brief report commends the Morgan County Medical Society for the achievements of its library.

#### PRIVATE MEDICAL BOOK COLLECTIONS AFTER 1850

The record of private medical book collections is bound to be incomplete except in the instance of the medical men who possessed large libraries which commanded wide public attention.

The records show that *Calvin Goudy* practiced medicine for a short time in Taylorville, and in 1848 was appointed professor of chemistry in the short-lived Rock Island Medical College. He later served for 16 years on the State Board of Education. He is described as a scholarly man to whom the people of Christian County "are indebted for preserving in the form of notes and manuscripts the names and other biographical sketches of the earlier settlers together with the incidents"<sup>23</sup> connected with them.

*John L. Hallam* began the study of medicine in the office of Dr. Turney in Fairfield, Wayne County, and attended his first course of lectures at Missouri Medical College, from which he graduated in 1848. He practiced in Centralia, Marion County. Dr. Hallam had a fondness for literature and he spent much money "in the purchase of standard works." It was said that "with perhaps one exception" he owned "the largest private library and the best collection of medical books in the city."<sup>24</sup>

<sup>23</sup> McBride, J. C.: *Past and Present of Christian County, Illinois*. S. J. Clarke Publ. Co., Chicago, 1904.

<sup>24</sup> *History of Marion and Clinton Counties, Illinois*. Brink, McDonough and Co., Philadelphia, 1881.

*Levi A. Mease* read medicine with his uncle, a physician of prominence. He later studied at Rush Medical College in Chicago, from which he received a diploma in 1851, and practiced medicine in Freeport. Early in his life, Dr. Mease began to collect medical books, and following the death of his wife in the epidemic of cholera, he endeavored to collect all attainable publications on that disease. He became an enthusiast also of the works of the old masters, including those of Hippocrates and Galen, and gathered about 200 early printed works in medicine, many of them pertaining to its history. This "Mease Collection," later donated to Rush Medical College and preserved in its library, illustrates the scholarship and learning of a pioneer physician who collected these volumes and who took an intense interest in the traditions and development of his profession.<sup>25</sup>

*A. E. Goodwin* settled in Rockford, Illinois, in 1854. He was widely traveled and had visited hospitals in many lands. "He was a close student, an incessant reader, and possessed one of the largest medical libraries in Rockford."<sup>5</sup>

*John Bartlett* came to Chicago in 1862, specialized in obstetrics, and became professor of this subject at the Chicago Polyclinic. The volumes on obstetrics—about 250 of them—in his extensive collection of books were later presented to the John Crerar Library.

*Thomas Wesley Shastid*, during the course of his education, acquired a love of philology and a knowledge of Latin and Greek which enabled him to read easily the most difficult of the classics in the original. He received his M.D. from the University of Missouri in 1856 and practiced in Pittsfield, Illinois, to the end of his life. His son, Thomas Hall Shastid, an eminent ophthalmologist, speaks of his father's collection of medical books. They were "housed in several bookcases that stood mostly in his office," while his general library was in "two large bookcases in the sitting room, a cross between a reception hall and a scholar's study. . . . The overflow from these was packed in the lowest drawer of my mother's bureau."<sup>26</sup>

*Robert W. Crothers* graduated from Jefferson Medical College in 1855, began practice at Canton in Fulton County, Illinois, and subsequently moved to Delavan in Tazewell County. He was described as a fearless physician, and a great reader who put forth every effort to keep up with his profession. In his library were found "many valuable works."<sup>5</sup>

*Isaac Newton Danforth* "was the collector of books bearing on the Puritans and the Pilgrim Fathers of New England, of which he had probably the best collection in Chicago. He also had a large number of old books

<sup>25</sup> Bay, J. Christian: Dr. Levi A. Mease and the Mease Collection at Rush Medical College, Chicago. *Bull. Soc. Med. Hist.*, Chicago, vol. 3, 1923.

<sup>26</sup> Shastid, Thomas Hall: *My Second Life*. George Wahr, publisher, Ann Arbor, Michigan, 1944.

both medical and miscellaneous, some of his medical works dating as far back as 1543."<sup>27</sup>

James Stewart Jewell was born in Galena, Illinois, in September 1837. He was "a very poor southern Illinois boy"<sup>28</sup> when he entered the office of Dr. S. M. Mitchell of Williamson County to study medicine. Dr. Jewell acquired a reputation for learning and ability. His reading was prodigious. He was a profound thinker as well, and his writings on both scientific and religious subjects rate high. His loyalty to the Christian faith was intense, and he was bold and outspoken in his endeavors to harmonize science and religion.<sup>5</sup> At the time of his death in April, 1887, his private library numbered about 3000 volumes, largely representing the field of mental and nervous diseases and pathology. This collection was bought by the Chicago Medical Library Association in 1889 from his estate,<sup>17</sup> was transferred in the following year to the Newberry Library upon the founding of its medical department, and then in 1906, to the John Crerar Library.

Michael Rooney was a member of the Board of Directors and the Book Committee of the Free Public Library of Quincy. He found his recreation in books instead of society, and by his methodical habits in his medical practice gained leisure for extensive reading and study. He left "a library of over 600 volumes."<sup>5</sup> Dr. Rooney and his wife, who also was a physician, were close friends of Dr. Montgomery and on their death he received these books. Some of them he still retains in his personal library, while many others he gave to the Quincy Medical and Library Association. These, it is assumed<sup>29</sup> are among the collection boxed in Quincy College.

William A. Byrd graduated from Missouri Medical College in 1867, began practice in Lima, Illinois, then moved to Quincy in 1873 where he won his celebrity. "Dr. Byrd's library was very complete, embracing nearly all important modern medical books and atlases, some 1500 or more volumes."<sup>5</sup> The fate of these books is shrouded in mystery. The immediate descendants and relatives of Dr. Byrd had no certain knowledge about them, and a nephew rejected as erroneous the report that his mother, a sister of Dr. Byrd, had received the library.<sup>24</sup> He said that the collection was given to Dr. J. B. Shawgo, an old associate of Dr. Byrd. However, the widow of Dr. Kirk Shawgo, the son of the associate, knew only that her father-in-law "had many books in his office" and that this office "was destroyed by fire on a Sunday morning after the explosion of an oil-heating stove."

<sup>27</sup> Webster, John C.: Isaac Newton Danforth (1835-1911). *Bull. Soc. Med. Hist.*, Chicago, vol. 1, 1911-1913.

<sup>28</sup> Johnson, Charles Beneuly: *Sixty Years in Medical Harness, or The Story of a Long Medical Life, 1865-1925*. Medical Life Press, New York, and the Library of Medical History. (With an introduction by Victor Robinson) 1926.

<sup>29</sup> Molony, Sarah S. (librarian, Quincy Public Library): Personal communications, July 28, 1952.



Father August Reyling, the librarian at Quincy College and a member of the Board of Directors of the Quincy Free Public Library, reported that he had no knowledge either of Dr. Rooney's or Dr. Byrd's library, and if some of their volumes were included in the collection from the Quincy Medical and Library Association he would have no way of verifying this fact.<sup>24</sup>

*Nicholas Senn*, a familiar figure in American medicine, was a noted book collector. A description given by Dr. Bayard Holmes<sup>17</sup> gives a conception of the magnitude of Senn's library. Alluding to Christmas-time of 1885 when Dr. Holmes visited Dr. Senn's home in Milwaukee, he said: . . . "There I saw his enormous collection of medical books and got my first idea of medical literature. . . . He had bought a fine old mansion in Milwaukee of the vintage of 1865, but the foundations of this structure were not equal to the carload after carload of books he placed on the walls of every room and hall—the kitchen and a few bedrooms alone excepted. Great rents broke the plaster here and there as if the place had been bombarded, and supports filled the cellar, reminding one of a coal mine."

This library which Dr. Senn had been assembling for years in the pursuit of his studies and his professional practice was a select one, containing the best medical and surgical literature in English, German and French. Later he acquired the extensive and famous personal library of Dr. Wilhelm Baum, professor of Surgery in the University of Göttingen and one of the founders of the German Congress of Surgeons.

This great collection was given to the Newberry Library for public use in 1894, and, at that time, it was said, represented a monetary value of \$50,000.<sup>30</sup> Dr. Senn had become anxious for the safety of its priceless possessions but it was Mrs. Senn, appreciating the value of her husband's library, who emphasized the insecurity of a private house from fire and other casualties. In April 1894, this accession to the medical department of Newberry Library commenced to be received, and in a short time a total of more than 7000 books, volumes and rare sets of periodicals were there safely stored and shelved. By the terms of the donation they were to be known as the "Senn Collection," were to be kept together on the shelves, retained as a library in their entirety and separately catalogued. In 1906, this collection was conveyed to the John Crerar Library.

The Senn Collection leads one to inquire further about the fate of the private medical libraries which were assembled in Chicago between the times of Elijah Dewey Harmon and the Great Fire of 1871. Because there was no appreciable concourse of books in any public library, zealous physicians to gain access to medical literature had to build up their own libraries, and we may assume that many such collections—most of them, perhaps of

<sup>30</sup> Stone, R. French (editor): *Biography of Eminent American Physicians and Surgeons*. Carlton and Hollenbeck, Publ., Indianapolis. 1894.

modest proportions—existed in the city before that conflagration consumed them. We know that such illustrious men as *Nathan Smith Davis*, *Hosmer Allen Johnson* and *Edmund Andrews* had interesting collections of medical books and that *Ralph N. Isham* had “found time to gratify his literary tastes” by gathering “one of the largest private libraries in Chicago.” Without doubt, similar statements can be made about the early leaders of Rush Medical College, especially *Daniel Brainard*, *James Van Zandt Blaney* and *Joseph Warren Freer*.

After the fire of 1871 we hear more about private medical libraries in Chicago during the late 1880's and the 1890's, at the time when the public library movement was getting under way throughout the country. Then *Christian Fenger*,<sup>31</sup> *William E. Quine*, *Frank Billings*, *Bayard Holmes*, *Ludvig Hektoen*, *George Weaver*, *Mortimer Frank* and many others were collecting books.

Any student of medical history who looks for an animated picture of the training and life of the general practitioner in our Middle West during the latter half of the nineteenth and the early part of the present century should read from cover to cover the book “Sixty Years in Medical Harness”<sup>22</sup> by *Charles Beneulyn Johnson*, in which he tells of the many books and periodicals accumulated by him during a long professional life: “I have always aimed to have up-to-date standard works on every subject pertaining to medicine.”

Among the physicians at the turn of the century who owned, it is said, notable medical libraries were the following: *J. B. Chatham* of Xenia in Clay County who “had one of the best medical libraries in the county”;<sup>32</sup> *Frank M. Harrison*, a widely known and highly successful practitioner near Bryan in Fulton County;<sup>33</sup> *Archie Tilden Gibson*, a leading doctor in Morrisonville, Christian County,<sup>18</sup> and *William Barnes* of Decatur and Macon County Hospital.<sup>34</sup> It is likely that *Carl E. Black*, too, who was interested in the library of the Morgan County Medical Society, had begun to assemble his own extensive working collection of books shortly after his entrance into medical practice.

#### MEDICAL BOOKS OF THE CHICAGO PUBLIC LIBRARY, 1870–1890

It may never be possible to determine exactly when, what and by whom the first contributions of medical books were made to the Chicago Public Library.

<sup>31</sup> Bay, J. Christian: *Dr. Christian Fenger, The Man and His Work*. Address delivered Nov. 4, 1940, before the medical faculty of Northwestern University on the occasion of the 100th anniversary of Dr. Fenger's birth, November 3, 1840.

<sup>32</sup> *History of Wayne and Clay Counties, Illinois*. Globe Publ. Co., Chicago, 1884.

<sup>33</sup> Hevlin, Jesse (Editor): *History of Fulton County*, in *Historical Encyclopedia of Illinois*. Munsell Publ. Co., Chicago, 1908.

<sup>34</sup> Neece, I. H.: Personal communication, November 26, 1951.

On July 13, 1889 and on March 22, 1890, communications were addressed to the board of directors of the Chicago Public Library<sup>35</sup> which are important in the annals of public medical libraries in the United States. The first was from Drs. Bayard Holmes and Ludvig Hektoen, "praying the Board to become custodians of the 'Jewell Library' until adequate arrangements can be made for its reception by the medical profession." The director of the library reported adversely upon this petition with the concurrence of the committee on administration. The second communication was from the Chicago Medical Society's committee on library, asking the Board of Directors of the Chicago Public Library to consider the proposition to transfer the medical reference books in the Chicago Public Library to the Newberry Library. This communication brought forth a report from the librarian that as of June 14, 1890, the Chicago Public Library showed a total of 3769 medical volumes in its shelves, as well as 1000 medical serials, and the librarian estimated their worth at \$6,000.00. After a thorough study of the proposal, the Chicago Public Library closed its Medical Reference Department in July 1890 and conveyed to the Newberry Library 3,313 medical books together with 3,270 volumes of miscellaneous medical magazines and duplicates and 4,550 pamphlets. It retained in the Circulating Department 458 medical books.<sup>35</sup>

#### ORIGIN OF HOSPITAL LIBRARIES

As far as could be ascertained, the oldest working hospital library in the City of Chicago, and perhaps in Illinois, is the Joseph Brennemann Library which was established in 1884 at the Children's Memorial Hospital. The movement toward effective hospital reference libraries did not, however, gain momentum until after 1900.

In résumé, the year 1900 marks, in general, the beginning of the change from the many relatively small private office and working libraries to the creation of very large collections of medical books, more and more centering in the medical schools. In Illinois only one striking exception appeared, namely, the John Crerar Library in Chicago. Generous private endowments and gifts have been adequate to support this splendid independent institution which has meant so much to the medical profession for these many years. The trend away from private libraries in doctors' offices and homes to institutional libraries was the inevitable result of the rise of medical specialism, with its resultant increase of specialized literature, together with the high cost of books and journals.

<sup>35</sup> Chicago Public Library 1888-1890. *Proceedings of the Board of Directors*, vol. 5 (July 14, 1888-June 28, 1890).



## CHAPTER XXIII

# THE ILLINOIS TRAINING SCHOOL FOR NURSES\*

By GRACE FAY SCHRYER

THE history of nursing in the West is very largely the history of the Illinois Training School for Nurses which was established in 1880 in Chicago. A small group of prominent public spirited women<sup>1</sup> originated a plan, first, to train young women to care scientifically for the sick and to make available to the public a valuable service and, second, to give the patients in the Cook County Hospital far better care than that rendered by the untrained and politically chosen attendants then employed.

It had been part of the original plan to enroll the student nurses in the Cook County Hospital because that great institution furnished opportunities for study and practical experience hardly to be equaled anywhere and the existing nursing conditions were none too good. The first meeting which gave hope of organization was held at the home of Mrs. Lucretia J. Tilton on August 3, 1880. On September 4th, a committee was appointed to select 25 persons for a Board of Managers for a nursing school, not less than seven to be chosen from each of the three sides of the city, without denominational or sectional bias. A charter which Judge Lawrence had applied for on August 30th was duly formulated, agreed to and signed on September 15th. In October, Dr. DeLaskie Miller, an early and loyal friend of the school, approached the Chicago Medical Society with the plan.

\* Because of the intimate relations between the work of the early years of the Illinois Training School for nurses and the medical profession, especially the members of the Chicago Medical Society, it has seemed fitting and proper to publish the early history of the school, which has long since become an integral part of the Cook County Hospital. Every training school and hospital in the State of Illinois has profited by the accomplishments of this school during the years 1880 to 1900. Permission has been granted to extract freely from *A History of the Illinois Training School for Nurses* by Grace Fay Schryer as published by its Board of Directors in 1930, and the material has been prepared by Miss Ella M. Salmonsens, Chief, Medical Department, John Crerar Library, Chicago.—*Editor*

<sup>1</sup> Mrs. J. M. (Lucy L.) Flower, well known for her work in the interests of children and young people; Dr. Sarah Hackett Stevenson, one of the few recognized women physicians of that day; Mrs. Edward Wright (Sarah Peck), considered the founder and originator of the school; Mrs. Charles B. Lawrence (Margaret Marsden); Mrs. Thomas Burrows, Mrs. A. A. Carpenter and Mrs. Orson Smith.

Great interest was shown in it, and on November 15th the following resolution was passed: "Resolved, that in the opinion of the Chicago Medical Society a properly conducted society for the training of nurses is desirable, and that we will aid the Illinois Training School for Nurses as well as we are able."

Miss Mary E. Brown, assistant superintendent of the Bellevue Training School in New York, was offered the position of superintendent in this new training school, with the privilege of visiting Chicago before deciding in order that she might better understand the situation. In February 1881, her formal acceptance for a period of six months was received, and she became the "lady superintendent" at a salary of \$800 a year.

At the same time that negotiations were being carried on with Miss Brown, the Board was endeavoring to come to a satisfactory agreement with the County Commissioners. There was much opposition. The warden strongly opposed the whole idea, contending that he did not believe in "female nurses" and that he "had never found them as competent as men;" he had male nurses who had been in the hospital eight years, and he doubted if the "ladies could furnish any better ones." This argument was cleverly turned against him when it was pointed out that the women nurses in the hospital were usually convalescents who left as soon as they were able, while the men stayed on year after year until they were so trained in their duties as to become in a sense trained nurses. Mr. C. G. Ayers, Chairman of the Hospital Committee of the County Board, was friendly toward the school, and it was through his efforts that entrance was finally gained.

Favorable action by the entire Board was not taken until about December 1. The Training School Board asked for and the Commissioners granted the same payment for the new nurses that had been given their predecessors.

Entrance to the hospital now being a certainty, attention was concentrated on the problem of financing the school and securing a house for the nurses. Mr. N. K. Fairbank was Chairman of the Finance Committee. As a first step in the raising of funds, invitations were sent out for a public meeting to be held at the Appellate Court Rooms in the Grand Pacific Hotel on January 15th; this was the first time that the citizens of Chicago generally were invited to take part in this work which was to prove to be of such great benefit to their city. Dr. Hosmer A. Johnson presided, and the Board of the Training School and many distinguished physicians and townsmen were present. Dr. Johnson called attention to the fact that the institution was at the service of all the people in Chicago, and Mr. Fairbank asked those present to subscribe. He stated that he had promised Mrs. Lawrence \$100, but after listening to what had been said, he was so impressed that he was giving \$500. Others responded with like generosity so that the subscriptions of that one evening amounted to \$1950.

The Board had planned to build a nurses home but at first it was necessary to rent one, so a committee leased a brick house at 69 Fluornoy Street for \$42.50 a month. The following year a house at 67 Fluornoy Street was rented; this was furnished for \$1277.91. Since the County Hospital would not board the nurses, full housekeeping was necessary and Miss Brown consented to take charge of that also. The family now numbered thirteen: the "general superintendent," two head nurses, eight pupil nurses and two servants.

As early as the preceding October, applications for entrance to the school had been received and eight were chosen. The honor of being the first nurse admitted went to Miss Isabella Lauver who lived to give 47 years of trained service to the communities in which she lived before her death in 1928. At the time of admission of the first pupil nurses, it had been planned to pay them \$6 a month for the first year and \$8 a month for the second, but in July this was increased to \$8 and \$12 respectively, "as the former was not sufficient to insure the best class of women." Requirements for admission were strict and were rigidly adhered to.

The first annual meeting was held on October 1, 1881 at the Palmer House. The Advisory Board was invited to attend. Mrs. Burrows, Secretary, summed up the history of the year and Dr. Stevenson, Chairman of the Hospital Committee, reviewed the course of study and the work done in the hospital. The Treasurer's report showed a balance of \$12,835.24.

The important project at this time was erection of a home for the school. By May 1882, the lot at 304 (now 509) Honoré Street, measuring 72 by 125 feet, was purchased for \$3600. Mr. Albert W. Cobb, a member of the Advisory Board, offered the professional services of Cobb and Frost, architects, but the Board insisted on their being compensated for their work and voted a sum not to exceed \$300 for that purpose. When the building fund reached over \$10,000 in November, the decision was made to begin work at once and ground was broken. The building was to cost \$21,700 and was to be completed by April.

In November 1881, an association had been formed for the support of the school, with annual dues of \$10. At the end of one year there were 219 members. This association continued on paper until 1911. During the 1890's, money from this source was generally used for charity nursing.

By February 1882, "all female patients were under the care of the School, and all female nurses belonged to the School." In December, one male surgical ward and the children's ward were added to the School's responsibilities. It had been a disappointment to the Board that no nurses were available for outside duty in the fall of 1882, as this had been promised to the public as one incentive for support. But the superintendent needed them for head nurses, and the public had to wait. By spring the situation



had changed, and on April 2, 1883, the first revenue came to the school—\$12 for one week's service. Very soon the charge was raised to \$3 a day and \$15 a week, of which amount only \$12 a month went to the nurse. There were two purposes in this system: (1) to increase the income of the school, and (2) to render to the sick outside the hospital a service at once valuable and useful to the public in introducing the idea of trained nursing. The reports on these nurses were all favorable.

In May 1882, Miss Brown resigned her position and was succeeded by Miss M. E. Hemple, a Bellevue graduate who had been successively head nurse and then assistant to Miss Brown.

The close relationship between the school and the medical profession is well illustrated by the following comments in the second annual report: "The Training School for Nurses had done excellent work in Cook County Hospital"—Dr. Moses Gunn. "Having had some small share in the work of organizing the School and in the education of the present corps of nurses, it is needless to say that I not only endorse the movement, but that I shall hereafter urge the employment of the graduates in my practice"—Dr. Ralph N. Isham. "The practical results of the Training School will be more fully felt and appreciated by the public when its graduates take the place of the Gamps and Prigs who for so many years have been the bane of the doctor and the bugbear of the patient"—Dr. Charles Adams. "The nursing has been as near perfection as anything can well be; it has been almost past criticism. In an observation of hospital practice of many years, I have never observed such excellent nursing. The School is educating in a most admirable and thorough manner, nurses for the sick generally, so that the public, as well as the hospital patients, may have trained nurses"—Dr. Norman Bridge. "Since the Illinois Training School for Nurses was given charge of certain wards in the County Hospital, I am satisfied that the patients are better cared for in every way, so far as nursing, diet and prompt and careful administration of medicine are concerned, and I believe that the result has been lives saved and the lowering of the death rate in the wards placed under their care"—Dr. D. A. K. Steele. "The more I see of these nurses the greater my admiration. Today the humblest occupant of a bed in the County Hospital receives a more skillful and humane nursing than the wealthiest citizen could procure where no trained nurses are to be had"—Dr. S. D. Jacobson.

In the spring of 1883, two great events took place: the opening of the new home and the graduation of the first class.

The years 1883 to 1890 were a period of steady growth and progress. The school had ceased to be an experiment; it was well known, and its nurses were in constant demand. With its limited number of workers, however, it was difficult for the school to meet all the demands made upon it and there

was continuous pressure on the Board and Faculty to enlarge the organization.

In April 1885, Miss Hemple resigned and Miss Brown was persuaded to return to her former position, where she remained for one year, this time at a salary of \$1000. Also in this month, the Medical Superintendent of the Presbyterian Hospital proposed that the school take over the nursing in that institution, the nurses to be boarded at the nurses home but live in the hospital where their laundry also would be done. The compensation for this service was to be \$125 a month and all revenue accruing from the care of private patients. This proposition was accepted and put into effect in May 1885. Miss Anne E. Steere, a graduate of the first class, was put in charge. Eight nurses were required for floor duty with additional ones for private cases.

The establishment of a registry of nurses had been part of the plan from the beginning. This was permanently installed in the summer of 1885. Graduates of other schools and nurses not regularly trained but well recommended were also allowed to register.

Miss Isabel Adams Hampton came to the school as superintendent in July 1886. She brought to the school a new spirit and, to a considerable degree, a new ideal in nursing. Her attention centered on the professional education of the nurse, systematizing the course, abstracting and applying principles. The approach was to be scientific rather than practical in the narrower sense. Such changes were inevitable as nursing increased in importance and a training school experience accumulated. Textbooks were now used instead of lectures for the more elementary studies, while theoretical instruction was extended through both years. The course was graded, with a distinction being made between the junior and senior classes. In February 1887, Miss Diana Kimber, also a Bellevue graduate, came to serve as assistant superintendent, replacing Miss Steere who had resigned to become a missionary in China where she served until a few years before her death.

The nurses home which had been completed in the spring of 1883 was too small by 1885 and by 1887, overcrowding was acute; 80 were housed where 50 had been provided for.

By January 1890, practically ten years after its organization, there were 90 pupil nurses in the school, including three probationers; 20 were at that time serving in the Presbyterian Hospital which had 120 patients. Cook County Hospital was then caring for 1130 patients a month, and the school had the responsibility of nursing in all the wards regularly used with the exception of the venereal.

In the history of the ten years from 1890 to 1900, the outstanding achievement of the Board of Directors and the one in which they were most pleased

was the establishment of a special outside nursing service made possible by the \$50,000 bequest from Mr. John Crerar.<sup>2</sup> This was the largest gift ever made to the school, and the new service was inaugurated in the fall of 1892. Four nurses were engaged exclusively for this work, each paid \$65 a month from the Crerar fund. In November 1893, the system was changed so that any nurse available was sent on a Crerar case and was paid \$15 a week from the fund. In this way they were limited in the number of cases supplied only by the funds available, and no nurse was paid who was not on duty. Only the interest on the fund was used, together with the money received from patients. The scale of prices was in direct proportion to the income of the patient or family.

The early years of the 1890's were fully occupied in Chicago by preparation for the World's Columbian Exposition, which was scheduled for the summer of 1893. In March 1891, the Board of the Illinois Training School decided to apply for space within the Fair Grounds for an exhibit of the work of the training schools. They desired to have erected a small emergency hospital in which trained nurses, representing different schools, should be employed, presenting to the public a practical demonstration of their work as well as affording relief and assistance to those persons either hurt while on the Grounds or suddenly in need of medical care. For the purpose of this exhibit, the Illinois Woman's Exposition Board offered the school an appropriation of \$6000. Dr. Mary A. Mixer was appointed Director of the Exhibit at a salary of \$1200 for the five month period. Her two assistants were Dr. Laura A. Randolph and Dr. Emma C. Geisse. These three resident physicians represented the three schools of medicine: allopathic, eclectic and homeopathic. The model hospital was under the supervision of the Illinois Training School. The nurses volunteered their services but their expenses were paid. Space in the Woman's Building not being available, it was at last decided that the exhibit should be housed in a separate structure of its own. Although directly under the management of the Illinois Woman's Exposition Board, the small hospital was built by Harlow N. Higinbotham, President of the entire Exposition.

The World's Fair Exhibit Committee of the Illinois Training School was actively associated with the work at the Exposition Grounds during the entire summer of 1893. When the hospital was dismantled at the close of

<sup>2</sup> Mr. John Crerar was both a well known citizen of Chicago and a public benefactor. Born in New York, he had come to Chicago in the 1860's and built up a fortune, most of which was returned in one way or another to the people of Chicago. By his will he left \$1,000,000 for philanthropic work (including the bequest to the Illinois Training School), and \$2,500,000 for the invaluable Crerar Library. Although Mr. Crerar died in October 1889, the school, because of a contest of the will, did not receive the legacy until May 1892, but it had already been voted "that this legacy, when received, shall be kept intact as far as possible, be named the 'John Crerar Fund,' a partial endowment to be held sacred to meeting the needs of those who cannot afford to pay the regular prices charged by graduates of this school."



the Fair, the Woman's Exposition Board, deeply grateful for the services rendered by the school, gave the "entire furnishings, with the exception of that which has been reserved to present to the Provident Hospital, to the Illinois Training School for Nurses without cost to them." In this way the school obtained certain equipment it had long needed. An official award was also bestowed upon the school.

On July 1, 1893, Miss Lavinia L. Dock, another Bellevue graduate, was appointed superintendent of the school. She remained about two years and was succeeded by Miss Isabell McIsaac of the class of 1888, the first of the school's own graduates to become its superintendent. During her administration, the great step forward was the extension of the course from two to three years. Within ten years this extension was accepted by the leading nursing schools of the country.

In 1895 the custom was established of grading pupil nurses on their practical as well as theoretical work. Another very important development started at this time, namely graduate work, and by 1899, postgraduate work was regularly offered to the school's alumnae during July, August and September.

So rapidly was the number in the school increasing, that in 1892 it was again necessary to extend living quarters. A lease was signed for a flat in the building just north of the nurses home, the rest of the building to be leased to the school for five years. The next step was the purchase, in 1897, of the building at 308 Honoré Street for the sum of \$9100. The school did not occupy the two-story cottage until a year later when, at an expense of \$2,731.95, it was put into condition for the nurses and a bridge was built from it to the home. Since more room was still needed, it was decided to add a wing, four stories and a basement in the form of a great L, extending south and east from the original building. This work was begun in August 1899 and completed early in 1900 at a cost of \$10,509.21. The upper floor was equipped as an infirmary; since 1895 it had been the rule to assign a nurse to take care of those nurses who were sick, and this new "ward" was appropriately named the "Margaret Lawrence Rooms."

In 1900, the Board of Managers suffered the loss through death of two of their most able and untiring members: Mrs. A. A. Carpenter and Mrs. Edward Wright. Both were charter members. Mrs. Carpenter had served for many years as second and then first Vice-president. Mrs. Wright served both as Corresponding Secretary and as second Vice-president, and her interest never abated. The twenty years' service of these women, closing with the century, measured also twenty years of notable achievement by the school which they fostered and in whose continued existence their ideals found an extended expression. Little did the founders of the Illinois Training School for Nurses realize how far-reaching an influence they were creating in their battle against prejudice, political antagonism and poverty.

## CHAPTER XXIV

# MEDICAL JOURNALISM IN ILLINOIS

By

MORRIS FISHBEIN, M.D.\* AND  
BARBARA FISHBEIN FRIEDEL

WITH THE ASSISTANCE OF  
ELLA M. SALMONSEN AND  
MRS. JOHN VAN PROHASKA

### INTRODUCTION

THE publication of medical periodicals in Illinois has paralleled closely the development of the area as a medical center. The astute leaders who founded the medical schools, built medical institutions, organized medical societies, and even those who originated and promoted weird medical beliefs and systems found publicity important in furthering their objectives. Thus the periodicals took the color of the men and the motivations, and in their titles reflect both.

Through the vast energy and indomitable leadership of Dr. Nathan S. Davis, Illinois became the headquarters of the American Medical Association and the place of publication of *The Journal of the American Medical Association*. Through the organizational ability of Dr. George H. Simmons, particularly with the aid of Dr. Frank Billings, *The Journal* gained circulation and prestige.

This activity was directly related to the work of Dr. Franklin H. Martin of Chicago, who organized the American College of Surgeons, established *Surgery, Gynecology and Obstetrics*, and made it the leading surgical journal of its time.

The American Hospital Association with headquarters in Chicago now publishes *Hospitals*, the leading hospital journal, and also *Trustee*, designed to cement lay support into hospital construction and maintenance.

In Chicago also are the headquarters of the American Dental Association and its official publication; the International College of Surgeons and its journal; the Association of American Medical Colleges and its periodical.

\* Because of his long experience as Editor of the *Journal of the American Medical Association*, Dr. Fishbein writes with authority on the history of medical journalism in Illinois. He has been ably assisted by his co-workers whose names appear above.—Editor

Several independent medical publications have found the central location, the printing facilities and the access to good medical libraries advantageous.

All these are the results of the evolution that occurred from 1844 to 1900.

### THE FIRST JOURNALS

Dr. James Van Zandt Blaney, a member of the Faculty of Rush Medical College, was editor in 1844 of the *Illinois Medical and Surgical Journal*, the first, and for several years the only medical journal serving Illinois, Indiana, Michigan and the territories of Wisconsin and Iowa. At that time this section of the country was well nigh inaccessible to journals published in other areas. However, the editor said that he hoped his publication would also introduce Western medicine to the Eastern physicians. Early issues contained abstracts of recent medical publications in the United States and Europe, reviews of new books, news items, reports of meetings, and original contributions. It had a continuous existence for 45 years, becoming successively the *Illinois and Indiana Medical Journal*, the *Northwestern Medical and Surgical Journal*, the *Chicago Medical Journal*, and finally the *Chicago Medical Journal and Examiner*, with which title it gave up the ghost in 1889. Incidentally, under its second title it became a bimonthly and was published simultaneously in Indianapolis and Chicago. This evolution occurred in 1846, at which time the editors were Drs. James V. Z. Blaney, Daniel Brainard, William B. Herrick of Chicago and Dr. John Evans, who then resided in Indianapolis. The publication survived under difficulties. Its name was changed again, subscribers wouldn't pay up, and the publishers were lax in getting the magazine off the press. Dr. Nathan S. Davis became editor in 1855. Around 1850, the publishers sent out \$3000 in bills and collected \$181.00.

These were the days when homeopathy stormed the citadel of medicine and it had a long and imposing record in Illinois. In this state its leader was Dr. George E. Shipman (1820-1893) of Chicago. From 1848 to 1852 he was editor of the *Northwestern Journal of Homeopathia*. Dr. Shipman had an interesting record as an editor:

1860-1861: *The American Journal of Materia Medica*

1860-1863: *The Medical Investigator*

1863-1869: *The United States Medical and Surgical Journal*

In 1865 he compiled and published "The Homeopathic Family Guide" which passed through eight editions. He translated many homeopathic books from German into English. Among other achievements he founded the Chicago Foundlings Home in 1871, after which he published the *Chicago Foundlings Record* in 1871. After Volume V, the name of the magazine was changed to *Faith's Record*.



In 1850 the Proceedings of the Medical Convention for the Purpose of Organizing the Illinois State Medical Society was published in Chicago. The meeting was held in Springfield on June 4, 1850, and adopted a constitution and the principles of ethics. It passed a resolution against quackery. At the second meeting in Jacksonville in 1852, delegates attended from seven county medical societies. The meeting was largely led and controlled by Dr. Nathan S. Davis, who also seems to have made most of the motions. The annual dues were set at \$2.00, and the members apparently got at least \$2.00 worth of service. The meeting expelled J. W. Halsted, an oculist, from the Stark Medical Society because of an advertisement in the press. A prize of \$20.00 was offered by Dr. Davis for the best essay on the difference between stimulants, of which alcohol is a type, and tonics, of which bitter barks and iron are specimens. The 1853 meeting was held in Chicago, and it was voted to continue the essay prize for another year and to hold the next meeting in La Salle. The Illinois State Medical Society published transactions for many years, including a volume covering the first 48 annual meetings from 1851 to 1898.

These early years were a period of many political struggles in medicine of the Midwest. The homeopaths were battling for recognition and publishing periodicals and articles to support their beliefs. In 1855 the *North-western Medical and Surgical Journal* came fully under the control of Dr. Davis. When it became the *Chicago Medical Journal*, the Illinois State Medical Society asked him to print its transactions. In the first three and a half years of its operation, Dr. Davis had lost \$1109.00 in publishing the magazine. In 1871, the October, November and December issues appeared combined because the Chicago fire occurred in October, 1871.

From January, 1860 to August, 1875, a monthly publication called the *Chicago Medical Examiner* was issued with Drs. N. S. Davis and E. A. Steele as editors. In 1858, while Dr. Daniel Brainard was in Europe, Dr. Davis persuaded the faculty of Rush Medical College to approve certain recommendations made by the American Medical Association. When Dr. Brainard returned, he vetoed them. Then Drs. Davis, Evans and others left the Rush faculty and formed the Medical Department of Lind University. The *Chicago Medical Examiner* was obviously the organ of the new school. This periodical contained abstracts of the proceedings of the Chicago Medical Society, the Chicago Academy of Medical Sciences and the Illinois State Medical Society.

Just for the record, we list *The Pharmacist* published briefly by the Chicago College of Pharmacy under the editorship of Albert E. Ebert; also *The Medical Investigator*, an organ of homeopathy from 1861 to 1874 which consolidated in 1875 with the *United States Medical and Surgical Journal* to become the *United States Medical Investigator*. Dr. Thomas

Cation Duncan, Secretary of the Illinois Homeopathic Medical Association, was its editor. The *Transactions of the Chicago Homeopathic Medical Society* was published in New York in 1859; there was one issue, mostly of case reports. The *Homeopathic Journal of Materia Medica, Chemistry and Pharmacology* appeared in 1867.

The trends in medicine are frequently reflected in the changing fortunes and titles of the medical publications. The *Chicago Medical Times* appeared in 1869 under the editorship of Drs. John Forman and R. A. Gunn. Dr. Forman was dean of the faculty and Professor of Anatomy and Clinical Medicine of the Bennett College of Eclectic Medicine and Surgery that opened in Chicago in 1868. Dr. Gunn was Professor of Surgery in the same school. Successively the editors were Drs. R. A. Gunn, J. A. Hurlbut, A. L. Clark, W. H. Davis and P. Ellingwood. The *Chicago Medical Times* merged into the *American Journal of Clinical Medicine*, which became abbreviated into *Clinical Medicine and Surgery* in 1894. From 1894 to 1905, it survived under the aegis of Dr. W. Abbott as the *Alkaloidal Clinic*, existing as the *American Journal of Clinical Medicine* from 1906 to 1924 and then for two more years as *Clinical Medicine*.

The *Illinois State Eclectic Medical Society Journal* appeared as transactions published in Springfield in 1883.

The *Chicago Medical Register and Directory*, containing a directory of the medical colleges, hospitals, infirmaries, asylums, and charitable institutions together with medical and other scientific associations of the entire state of Illinois, was published first in 1872 and then annually under the supervision of the Chicago Historical Society with the cooperation of the Illinois State Medical Society. The editors of Volume 1 were Drs. T. D. Fitch and Norman Bridge; of Volume 2, Dr. A. R. Jackson; of Volume 3, Dr. D. W. Graham. From 1876 to 1887 it was the *Chicago Medical Register*, and from 1878 through 1879 the *Illinois State Medical Register*.

A magazine called *Lens* appeared from 1872 to 1875. The *Hahnemanian Advocate* ran from 1873 through 1902.

The *Medical Register and Advertiser* was published monthly under the editorship of Dr. James I. Hale in Anna, Union County, Illinois, during 1875 and 1876.

The *Monthly Journal of the Southern Illinois Medical Association* was established at Cairo, 1877, edited by Drs. C. W. Dunning and Horace Wardner.

The *Illinois Medical Recorder* was published monthly under the auspices of the District Medical Society of Central Illinois from June, 1878 to May, 1879. Its editor was Dr. R. E. Beach and the associates were Drs. F. Haller, Vandalia; W. J. Chenoweth, Decatur; T. D. Washburn, Hillsboro, and B. M. Griffith, Springfield.

The *Peoria Medical Monthly* was published in Peoria from 1880 to 1890 with Dr. T. M. McIlvaine as editor.

The *Medical Call* was published at Quincy, Illinois, from 1881 to 1888.

By this time Chicago was apparently serving as a publishing center for medical periodicals. The *American Homeopath* was published from 1878 to 1880; the *Homeopathic Record* in 1878; the *Medical Counselor*, the official journal of Michigan State Homeopathic Medical Society, for six volumes in Chicago and then Grand Rapids and Ann Arbor, after which it united with the *Medical Era* in 1889 and was revived with the original numbering in 1896 and merged with the *American Physician* in 1909. The *Western Medical Reporter* was published in Chicago from 1880 to 1895 and had as a subtitle on the first two volumes "The Indiana Medical Reporter," these two volumes emanating from Evansville, Indiana. Then there was the *Medical Review of St. Louis* from 1880 to 1914, which was published in Chicago and at times in St. Louis and which was first the *Chicago Medical Gazette*, then the *Chicago Medical Review*; from 1885 to 1886 the *Weekly Medical Review*; after that the *Medical Review*; then the *St. Louis Medical Review* and still later the *Weekly Medical Review and Journal of Obstetrics and Diseases of Women*, finally being absorbed in 1913 as the *Medical Era of St. Louis*. *Clinique* was a monthly published by the Illinois Homeopathic Medical Association which ran from 1880 to 1926, absorbing the *Medical Era* in 1904 and the *Medical Visitor* in 1906.

#### THE FIRST SPECIALTY JOURNALS

The *Chicago Journal of Nervous and Mental Disease* began as a quarterly in 1874 under the editorship of Drs. J. S. Jewell and H. M. Bannister. Apparently it had publishers also in New York, London, Edinburgh and Leipzig. The magazine was sold in 1880 because Dr. Jewell was ill and Dr. Bannister removed to Kankakee, Illinois.

The *Pathological Transactions of the Chicago Medical Society* was published in three numbers under the editorship of Dr. I. N. Danforth from October, 1876 to 1877.

The first number of the *Journal of Cutaneous Diseases Including Syphilis* appeared October 7, 1882, becoming eventually the *Journal of Cutaneous and Venereal Diseases*, then the *Journal of Cutaneous and Genitourinary Diseases*, and finally the *Archives of Dermatology and Syphilology*. Its place of publication varied between Chicago and New York.

#### THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION

Until 1883 the proceedings of the American Medical Association were published as Transactions. At the meeting of the Association in Cleveland in 1883, Dr. N. S. Davis, Chairman of the Board of Trustees, reported that



2100 pledges to sustain a journal had been received from a mailing list of 40,000 physicians, thus assuring its publication. Estimates for printing had been obtained and, as the bid of a Chicago company was lowest, Chicago was recommended as the place of publication. The Trustees were authorized to proceed with the publication, and Dr. Davis was introduced to the assemblage as editor-in-chief. The first number appeared July 14, 1883. It contained 32 pages which included a transcript of the minutes of the meeting of the Association, a gain of ten months on the usual interval between the meeting and publication of the minutes. Even at that early date the editor was requested to secure reliable correspondents in medical centers in the United States and abroad. He was asked to solicit advertisements from "all medical educational institutions and hospitals open for clinical instruction; from book publishers, pharmacutists, instrument makers and all other legitimate business interests. But all advertisements of proprietary, trade mark, copyrighted or patented medicines should be excluded. Neither should any advertisements be admitted with one or more names of members of the profession as indorsers, having their official titles or positions attached." By the end of the year *The Journal of the American Medical Association* had a circulation of 4000 and regular correspondents in Cincinnati, Cleveland, Indianapolis and Washington, D. C.

In the following year (1884) a battle occurred in the American Medical Association when a contingent headed by Dr. John H. Packard endeavored to move the magazine to an eastern city. Dr. Davis resigned, but his resignation was not accepted. Then the delegates voted 191 to 74 to table a motion for removal. However, in 1888 his resignation was accepted, and Dr. John B. Hamilton was elected to succeed him. He served for only a few months and then resigned. *The Journal* was thereafter edited by a committee of the Board. Dr. John H. Hollister was supervising editor and was later made editor. Then, in 1891, in the midst of much agitation to remove *The Journal* to the east, Dr. J. C. Culbertson of Cincinnati was made editor. The battle waged fiercely but Chicago kept winning. With the last issue of June, 1893, Dr. Culbertson resigned. Then Dr. Hamilton resigned as trustee and was immediately elected editor. Dr. Culbertson began publishing letters in the *Cincinnati Lancet Clinic* attacking *The Journal*, followed by attacks in the *New York Medical Record*, the *Philadelphia Medical News* and the *Pittsburgh Medical Review*. Those were the years of fighting personal journalism.

By 1898 the affairs of the Association were decidedly confused. Dr. George H. Simmons was elected permanent secretary. In December, 1898, Dr. Hamilton died and Dr. Simmons succeeded him as editor, and he demonstrated his genius as editor by a number of immediate improvements, not the least of which was the publication in the following year of an index.

Dr. Simmons continued as editor until 1924 when he was succeeded by Dr. Morris Fishbein, who had become assistant to the editor in 1913.

*The Journal of the American Medical Association* by 1900 had become one of the leading medical journals of the world from the point of view of circulation, prestige, earnings and coverage.

#### MEDICAL EDUCATION, CULTISM AND PUBLICATIONS

Up to June, 1884, there had been 509 medical journals in the United States, of which only 136 were surviving. The rise of medical publications in Illinois in the period 1885 to 1900 is a reflection of the numerous medical schools and the various forms of cultism and quackery that prevailed.

The *Northwestern University Medical School Alumni Association* was published from 1884 to 1888. The *Ogle County Medical Quarterly* appeared in 1885 and 1886. One L. D. Rogers with S. Ida Wright Rogers produced the *People's Health Journal* from 1885 through 1906. The *American Electro-Clinical Record* appeared in 1885 and was merged with the previously mentioned *Medical Era*. The *Medical Visitor* (homeopathic) survived from 1885 to 1905 and was merged into the previously mentioned *Clinique*. Loyola published a popular scientific quarterly called the *Journal of Heredity* from 1885 through 1891. The *Neurological Review* was founded by Dr. James Stewart Jewell in 1886; three issues appeared; Dr. Jewell died in 1887 and the periodical stopped. The *Medical Standard*, edited by Dr. E. D. Irvine, is credited with life from 1887 to 1931, part of the time as the *Journal of American Medical Hydrology*.

Here is a typical periodical history: The *Omaha Clinic*, 9 volumes, merged into the *Chicago Clinic*, 4 volumes, into the *Chicago Clinical and Pure Water Journal*, 7 volumes, into the *Chicago Clinic and Pan-Therapeutic Journal*, 1½ volume, into *Practical Therapeutics*, 1 volume, into *Therapeutic Medicine* and the *Chicago Clinic*, 2 volumes, into the *Medical Review of Reviews*, 12 volumes, taken over by the Chicago Clinical School, moved to La Grange, Illinois, and then *finis*.

The official proceedings of the Chicago Medical Society were published in three volumes from May, 1888 to February, 1891. These proceedings were published as a supplement to the *Western Medical Reporter*, and continued from 1891 to 1903 in the *Chicago Medical Reporter*.

The *North American Practitioner* was published from 1889 to 1899 with the previously mentioned Dr. Hollister as editor. Then it became the *Journal of the Post Graduate Medical School of Chicago*, edited by Drs. Bayard Holmes and Junius C. Hoag. The first three volumes were edited by Drs. Holmes and Louis J. Mitchell.

*Cook County Hospital Reports* appeared from 1890 through 1896.

The Rush Medical College group issued *The Corpuscle* from 1890 to 1900

from the Medical Department of Lake Forest University. Still later came the *Bulletin of the Rush Medical College Alumni Association*. The sophomores at Rush issued *The Pulse* in 1894-95.

From 1890 to 1893 the *Annual of Eclectic Medicine and Surgery* was published, first under the editorship of Dr. Finley Ellingwood and then Dr. J. V. Stevens. The *Health Monitor* was a popular bimonthly for electro-homeopathy in America from 1891 through 1897.

Here is another record of a periodical that somehow refused to die: The *Chicago Medical Recorder* began in 1891 as a bimonthly with Dr. Archibald Church as editor. It passed through various phases as the *Mississippi Valley Medical Journal* and the *Radiological Review*, and it was the organ of the Medico-Legal Society, the Tri-State Medical Society, and the Chicago Medical Society.

The *Journal of Orificial Surgery* was edited from 1893 to 1901 by a proctologist named Dr. E. H. Pratt.

The *American Journal of Clinical Medicine* finally became *Clinical Medicine* edited by Dr. George B. Lake. The *Clinical Review* from 1892 to 1907 was edited by Drs. George Henry Cleveland and Albert I. Bouffleur. The *Hahnemann Pulse* was the official organ of the students of Hahnemann College. The *Chicago Journal of Health* was born and died after one issue in February, 1893. Then homeopathy contributed some numbers of the *Medical Advance* and the *Medical Century*.

The *Interstate Medical Journal* began in 1894 as the organ of the Tri-state District Medical Association, continued under the Interstate Post-graduate Medical Association of North America and was continued in May, 1919 as *Modern Medicine*.

*American Alkatometry* was published from 1894 to 1901.

The *Railway Surgeon*, first issued in 1894 by Dr. W. B. Outen, was taken over with Volume 5 by Dr. L. J. Mitchell. It then became the *Railway Surgical Journal*, and in 1929 merged into the *International Journal of Medicine and Surgery*.

*Plexus* was the name given to a periodical of the College of Physicians and Surgeons (Medical Department of the University of Illinois). Seventeen volumes were published and the publication lived from 1895 to 1913.

The *Illinois Medical Journal* (non-state) appeared in DeKalb from 1895 to 1896. In 1899 this same name was given to the official organ of the Illinois State Medical Society and Dr. Charles J. Whalen was established as its editor. He became distinguished as a leader in local, state and national medical affairs and was one of the first to anticipate the danger of state and socialized medicine.

As the Bible records the begats, I pause to mention the *Medical Missionary and Gospel of Health* from Battle Creek, 1897 to 1901; the *Chicago*



*Clinic*, official organ of the Chicago Clinical School, from 1898 to 1901; the *Chicago Medical Observer*, 1889 and 1899; the *Journal of Scientific Medicine*, 1898 to 1900; the *Journal of Chronic Diseases*, 1898; *Hospital Life*, 1898. The *Western Clinical Recorder* was published in Chicago, 1899 to 1900.

The first of the Yearbook Series was the Yearbook of the Nose, Throat and Ear, 1900 to 1901. The Germans had established periodicals devoted exclusively to abstracts and popularized them. Gradually yearbooks appeared dealing with internal medicine, surgery, therapy, ophthalmology and other subjects. The editors were distinguished Chicago specialists who found this a means of keeping abreast of progress and of encouraging young assistants to do the same.

The listing is no doubt incomplete. Publications appeared for one issue and then disappeared. Homeopathy, eclectic medicine, osteopathy, chiroprody, dentistry, veterinary medicine and the basic medical sciences issued publications.

New centers developed later in the Middle West with notable publications coming from Minneapolis and Kansas City. But Illinois, with the headquarters of the great national medical organizations and with five medical schools, many great hospitals and a new postgraduate medical school, will no doubt for many years to come hold the leadership that began with the men and the initiative of 1844 to 1900.

## CHAPTER XXV

# EARLY MEDICAL SOCIETIES

By HAROLD M. CAMP, M.D.\*

IN reviewing the available early histories of Illinois, as well as the early medical journals and lay press, one observes that there were many medical societies organized in this state even before 1850. Information concerning a number of them has been obtained from one of the oldest newspapers in this area, the *Edwardsville Spectator*, which published reports of meetings of societies dating as far back as 1817.

It is learned through this newspaper that, prior to the admission of Illinois to the Union in 1818, under the old Illinois Territorial Act, a Territorial Medical Practice Act was developed and under a mandate, two district medical societies were formed. A resolution was approved which stated: "Whereas well regulated medical societies have been found to contribute to the diffusion of true science, and particularly to knowledge of the healing art, therefore, for the purpose of regulating the practice of physic and surgery, this law is enacted." Two districts were formed; one east and one west of the third principal meridian. The ordained duty of the members was to examine students, give diplomas, charging therefor ten dollars.

Apparently but little heed was given to this enactment, for the year following Illinois's entrance to statehood "an Act for the establishment of medical societies" was passed. It directed that the state should be divided into four medical districts "in each of which there shall be a board of physicians," and it specifically stated that "it shall be the duty of each and every physician of such districts to attend meetings," and without sufficient excuse, a fine was to be exacted! They were to elect officers, examine students, collect \$10.00 for diplomas issued, and see to it that those not complying with the provisions of the act be disqualified from collecting debts from their practice. Another section of the act provided for the registration of births, deaths and diseases, the reports to be transmitted to and published in some newspaper. Failure to follow these provisions would re-

\* Dr. Camp started to serve the Illinois State Medical Society as Secretary in May 1924. He was elected Treasurer of the Society in May, 1941, and has continued in the dual capacity as Secretary-Treasurer since that time. Dr. Charles J. Whalen, for years Editor of the *Illinois Medical Journal*, died in April, 1941, and since then Dr. Camp has served as Editor.—Editor

sult in a fine of \$10.00. Another section of this bill provided for the examination of bills rendered by physicians for exorbitant charges, make necessary adjustments, and return such surplus as might be unreasonably made. This law was repealed by the legislature in 1821.

In 1824, a bill was again brought before the legislature to organize the medical profession under state control and "on motion of Mr. Forquer, a select committee of three was raised to inquire into the expediency of establishing by law, Medical Societies with leave to report bill or otherwise. Messrs. Forquer, Sim and Logan composed the committee." It seems quite obvious that this legislative action was prompted by a popular demand for reform in the medical situation made reprehensible by the presumption of the unqualified to treat the sick.

In the April 25, 1820, issue of the *Edwardsville Spectator* and in several following issues, notices appeared stating that an attempt was being made to fulfill the provisions of the Medical Practice Act of 1819, as follows: "The First District Medical Society of the State of Illinois will convene in Edwardsville on the second Monday of May next," and it was signed by John Todd, President. Another call was made October 9, 1820, appearing in the issue of October 24th, stating "The Society composed of the first medical district of Illinois, will meet at Edwardsville the second Monday of November next, at 10:00 A.M. agreeable to previous adjournment. . . . It is hoped that the importance of this meeting will be sufficient inducement to cause punctual attendance of the members." This was signed by Dr. Todd's partner, Dr. Samuel J. D. DeCamp, Secretary.

This district society was obviously functioning, as Dr. Todd published a report of an epidemic of fever as related by Dr. J. J. Crabb, Belleville, at one of its meetings. The statement was made "that the disease answers the description of a unit defined by Dr. Rush, bilious and malignant." The annual meeting of the First District Medical Society was held at Edwardsville the second Monday of May, 1821, and was noted in the call signed by Dr. Henry Perrine, Secretary. In the calls it was stated that "punctual attendance is particularly requested, as business of importance will be laid before the meeting."

The Second District Medical Society was likewise functioning, as was evidenced by a report published May 29, 1820, by William L. Reynolds of the Kaskaskia Medical Society and given by Hugh Steel of Brownsville in Jackson County, telling of health conditions prevailing in that county.

These societies were quite obviously the first medical societies to be organized in Illinois. We are all familiar with the organization of the Medical Society of Illinois, organized in 1840 with John Todd, President, and C. F. Hughes, Secretary. Efforts were obviously made to keep this Society alive, and a few meetings were held.



On December 18, 1849, an official call went out from the Ottawa Medico-Chirurgical Society, asking for a meeting to be held in Springfield on January 1st to organize an Illinois State Medical Society. The efforts of the Aesculapian Society of the Wabash Valley were also petitioned by the Ottawa Society. Later, on account of bad roads and frozen waterways, the call was changed to the first Tuesday in June, 1850. This call resulted in the reorganization meeting of June 4, 1850, at which time the organization of the Illinois State Medical Society was perfected which has been active to the present time.

#### EARLY COUNTY MEDICAL SOCIETIES

Information has been found concerning a number of county medical societies organized in various parts of the state. Most of them functioned but a short time.

Morgan County had a short lived medical society in 1846, organized at Jacksonville. In 1847 there was an organization instituted at Ottawa called the Medical Society of LaSalle and adjoining counties and this, too, soon subsided. The LaSalle County Medical Society was organized in Ottawa on July 29, 1853, but no evidence is available to show subsequent meetings. The first Whiteside County Medical Society was organized July 22, 1851, but it existed only a short time.

The Chicago Medical Society was founded in 1850. Dr. Levi Day Boone, who formerly had practiced in Southern Illinois, came to Chicago in 1836, during which year he aided in forming the Cook County Medical Society. As Secretary, he had published in the October 1, 1836, issue of *The Chicago Democrat*, an article entitled "Improvement in Medical Science" in which he stated:

"Mr. Editor:

The physicians of Chicago have recently constituted a society for the improvement of their profession to be known by the name of the Cook County Medical Society, and have directed me (by resolution) to give notice through your paper that the first meeting of the Society will be held at the office of the Chicago Insurance Company, on Monday Evening next, at which time, at half past six o'clock, an essay will be read by a member of the Society.

L. D. Boone, Secretary"

The writer has been unable to find evidence of subsequent meetings or of other medical societies formed in Cook County until the organization of the Chicago Medical Society on April 15, 1850. The preliminary meeting was held in the office of Drs. Levi Boone and Brockholst McVickar. Dr. David Rutter was made chairman of the proceedings, in which Dr. Nathan Smith Davis took an active part. On April 19, 1850, the name of the

Chicago Medical Society was given to this new organization. Dr. Levi D. Boone was elected President, Dr. Erial McArthur, Vice-President, and Dr. Brockholst McVickar, Secretary. At this meeting, Drs. Boone and John Evans were selected as delegates to the American Medical Association. It was devised to hold meetings on the first Monday of each month. Among those present at the organization meeting were Drs. Daniel Brainard, W. B. Herrick, Edwin G. Meek, J. Herman Bird, J. V. Z. Blaney, Samuel O. Richey, Philip Maxwell, Levi D. Boone, Brockholst McVickar, David Rutter, Erial McArthur, John Evans and Nathan Smith Davis.

The first medical society in Peoria was established in 1846. It was reorganized in 1847, then became the Peoria Medical Society in 1848. This same year, a medical society was formed in Rock Island, mainly through the efforts of members of the faculty of the Rock Island Medical College. The Adams County Society was organized in Quincy on March 28, 1850. A society which existed but a short time was organized at Carthage, Hancock County, in 1852. Other societies formed in 1852 were the Macon County Medical Society at Decatur, July 17; McHenry County Medical Society, December 24, and Knox County Medical Society, June 26. A short lived society was formed in Stark County in 1848, but no records of subsequent meetings are available.

Other societies formed in 1851 were the Whiteside County at Union Grove, July 22; Fulton County at Canton, May 24; Cass County in August, and Winnebago County at Rockford, January 30, 1851.

The following county medical societies organized during the 1850's: McLean County at Bloomington, May 20, 1854; Jersey County at Jerseyville in 1855; Coles County at Charleston in 1855; DeWitt County at Clinton on May 6, 1856; Champaign County in 1858, and the Ottawa City Medical Society which was organized on April 4, 1855.

Information relative to the organization of these early county societies was procured from reports appearing in the *Northwestern Medical and Surgical Journal* and from the writings of Dr. William O. Ensign, an organizer of a number of central Illinois societies, a President of the Illinois State Medical Society, and for many years designated as the Official Historian of the State Society. Dr. Ensign stated that most of these earlier societies were of short duration. Quite a number were reorganized several times until, through the efforts of the Illinois State Medical Society, permanent county societies were ultimately organized and maintained.

#### DISTRICT AND REGIONAL MEDICAL SOCIETIES

Records are still available to show that many societies were organized in Illinois composed of members from several counties. Some of these were formed prior to the reorganization meeting of the State Medical

Society in 1850. A few have been maintained to the present time, but the majority of them functioned for a few years and then disbanded.

*The Aesculapian Society of the Wabash Valley.*—The Aesculapian Society of the Wabash Valley is said to have been the first interstate society organized west of the Allegheny Mountains. It was organized unofficially in 1846, officially in 1846, and incorporated in 1847. Drs. David Adams, Elisha C. Banks and J. M. Boyle appeared before the Illinois legislators and, in response to their petition, the society became a regularly chartered institution on February 17, 1847. It was first incorporated under the name of "Lawrenceville Aesculapian Medical Society." Dr. Elisha C. Banks of Lawrenceville was its first President, and Dr. David Adams was the second presiding officer.

The Society in 1849 met at Mt. Carmel, Illinois, and instructed its Secretary to correspond with the Ottawa Medico-Chirurgical Society with reference to appointing delegates to a convention to be held in Springfield in 1850, with the object of reactivating the Illinois State Medical Society.<sup>1</sup>

The Aesculapian Society grew rapidly. Within a relatively short time the majority of its members lived outside of Lawrence County, although they came, in general, from the communities near the Wabash River Valley. The name of the Society was, therefore, changed to the Aesculapian Society of the Wabash Valley and the bill of incorporation was properly changed. In the early dates of this Society, the meetings were of two days duration, Wednesday and Thursday. For many of its members this meant a day's journey going to the meeting and another day for the return trip home, thus compelling them to be away from their work for as long as four days.

Most of the members of the Society resided in the counties of Lawrence, Crawford, Clark, Edgar, Vermilion, Champaign, Douglas, Coles, Cumberland, Jasper, Effingham, Shelby and Moultrie in Illinois. The Indiana members were principally from the counties of Sullivan, Vigo, Vermilion and Parke. However, individual members were elected from other counties in both these states throughout the years.

Many prominent members of the Aesculapian Society were likewise prominent in the activities of the Illinois State Medical Society. Dr. Samuel Thompson of Albion, a charter member of the Aesculapian Society, was elected as the second President of the State Medical Society. Dr. Thomas D.

<sup>1</sup> Medical historians differ in this matter. Some state the initiative was taken by the Ottawa Society, while others give credit for initiating the venture to the Aesculapian Society. It seems quite possible that the idea of having one statewide medical organization was considered by these two older medical societies at approximately the same time. Both desired to keep up with the ever-changing medical practice, to exchange experiences with other members of the profession, and to discuss the recent discoveries being published in the medical journals. The desirability of establishing a code of medical ethics was likely discussed at these early meetings.



Washburn, who moved from Lawrenceville to Hillsboro in 1856, was elected President of the State Society in 1876. Other members of the Aesculapian Society who became presidents of the Illinois State Medical Society were Drs. William M. Chambers, Charleston, 1860; James S. Steele, Grand View, 1865, and G. W. Albin, Neoga, 1871. It is also noted that four members of the Aesculapian Society became presidents of the Indiana State Medical Association.

At a meeting of the Society held at Paris, Illinois, in 1854, a committee was selected to prepare a memorial and petition to be presented to the state legislature for "the suppression of quackery." Dr. Charles Johnson, chairman of this committee, was directed to take the petition to the legislature and to use his influence on the members to secure passage of a law which would protect the public from injuries inflicted by medical pretenders. The committee was not able to secure its passage.

Together with a committee from the Illinois State Medical Society, a committee was appointed by the Aesculapian Society to petition the state legislature to pass an act which would create a State Health Department. Efforts were made at each biennial session for some twenty years which eventually (1877) resulted in the approval and organization of a State Health Department and a Medical Practice Act.

The Aesculapian Society of the Wabash Valley deserves much credit for its aid in reactivating the Illinois State Medical Society in 1850, for the development of a Medical Practice Act, and also for the development of the Illinois State Health Department. The Society, although more than 100 years old, still has meetings regularly which are well attended by members from Illinois and Indiana along the Wabash River Valley.

*Rock River Medical Society.*—The Rock River Medical Society was organized at Rockford, February 17, 1846. With Dr. J. C. Goodhue as President, the meeting adjourned to meet on May 19, 1846. It was stipulated that there be a semi-annual and an annual meeting. The annual meeting was held in Rockford on May 18, 1847, and the semi-annual meeting that year was held in Beloit, Wisconsin. Apothecaries were admitted to its membership and one apothecary was among its organizers. Dr. Daniel Brainard joined this Society and he stated that "it was the first medical society organized upon so extensive a scale in this region."

Among the early members were Drs. William O. Chamberlain, S. Allen Paddock, W. W. Welch and Ephraim Ingals. At the 1847 annual meeting held in the Rockford Court House, Dr. L. Clark was President. Drs. Jeremiah Russell, Charles H. Richings, C. C. Bradley and John Mitchell were admitted to membership at this meeting. Others present were Drs. Van Brunt, Armor, Abbott, D. G. Clark, A. M. Catlin (Secretary), E. N. Clark, Lane, Spencer, C. G. Clark, A. Clark, Haskell, Williams and Hooker.

No records are available to show that meetings were held after 1850.

*Ottawa Medico-Chirurgical Society.*—The Ottawa Medico-Chirurgical Society was organized at Ottawa, January 1, 1849. Believing in the advisability of having an active statewide medical organization, this Society was the first to issue a call for the reorganization meeting which was held at Springfield on June 4, 1850. A circular was issued and sent to several existing societies in the state to get their support, the call asking for the convention to be held in Springfield on January 1, 1850. After much discussion as to road conditions, the call was changed from January to June. The Aesculapian Medical Society of the Wabash Valley concurred in this request and acted as co-sponsors. These facts, together with the actual account of the reorganization meeting of the Illinois State Medical Society in 1850, were reported in the 1849–50 issues of the *Northwestern Medical and Surgical Journal*.

*Medical Society of Upper Illinois.* This Society was organized at Lacon on July 2, 1850. It was to comprise the counties of Marshall, Bureau, Stark and Putnam and was to be auxiliary to the Illinois State Medical Society. The following officers were elected:

President, Albert Reynolds, Magnolia  
Vice-President, Robert Boal, Lacon  
Secretary, S. Allen Paddock, Princeton  
Treasurer, Uri P. Golliday, Lacon  
Censors:  
Thomas Hall, Toulon  
William O. Chamberlain, Princeton  
Lucius G. Thompson, Lacon

Most of these physicians were prominent in the early meetings of the Illinois State Medical Society. In the early years following reorganization of the State Society at Springfield in June, 1850, the Medical Society of Upper Illinois sent official delegates to the annual meetings. From information which is available, it seems quite evident that this Society did not hold many meetings.

*Fox River Valley Medical Association.*—The Fox River Valley Medical Association was organized at a meeting held in Aurora on February 1, 1850. The group selected the following delegates to attend the State Medical meeting: Drs. A. Hard, S. B. Hawley, M. M. Robbins (all of Aurora); F. H. Blackman, Geneva; G. B. Lester, Oswego, and D. S. Jenks, Plano. In 1852, the members of this Association met and formed the Bi-County Medical Society of Kane and McHenry Counties. An organization meeting was held in Aurora in September 1864, when a reorganization was made under the name of the Fox River Valley Medical Society. Apparently this Society did not flourish, as another reorganization meeting was held in Aurora in

in September, 1874. In 1895, the membership of this Society was reported as 60.

*Union Medical Association of Southern Illinois.*—According to the *Northwest Medical and Surgical Journal*, this society was organized at Vandalia in 1856. Dr. George W. Hotchkiss was President, and Dr. W. D. Green was Secretary. No further information is available to show that subsequent meetings were held.

*The Military Tract Medical Association.* That portion of Illinois designated as the Military Tract pertains to "a section of Illinois set apart under an act of Congress, May 6, 1812, as bounty lands for soldiers in the war with Great Britain beginning that year." The Military Tract was located between the Illinois and Mississippi Rivers from the point of their junction, extending northward to a point on the Mississippi River some twelve miles south of the mouth of the Rock River and on the Illinois to a point a few miles west of the city of Peru. This tract was surveyed in 1815-16 and comprised 2 million acres, which later was increased to  $3\frac{1}{2}$  million acres.<sup>2</sup> In 1821, the tract was a part of the then gigantic county of Pike which at that time included all lands between the Illinois and Mississippi Rivers, all lands north of the Illinois and Kankakee Rivers to the Wisconsin line, and all lands east of the Mississippi River to Lake Michigan and the Indiana line north to the Wisconsin line. As the population increased, new and smaller counties were formed so that at present the Tract embraces all or part of the counties listed below.<sup>3</sup>

COUNTY	ORGANIZED	ORIGIN OF NAME
Calhoun	1825	John C. Calhoun, Secretary of State under Monroe and Tyler
Pike	1821	Maj. Gen. Zebulon Pike, explorer, killed at York, Canada, 1812
Adams	1825	President John Quincy Adams
Brown	1837	Maj. Gen. Jacob Brown, War of 1812
Schuyler	1825	Maj. Gen. Philip Schuyler, Revolutionary War
Hancock	1825	John Hancock, first signer of the Declaration of Independence
McDonough	1826	Comm. Thomas McDonough, Battle of Lake Champlain, 1812
Fulton	1823	Robert Fulton, steamboat builder

<sup>2</sup> According to Walter Havighurst (*Land of Promise: The Story of the Northwest Territory*, 1946. The McMillan. Co. N.Y.), after the War of 1812, the United States created Military Tracts of 2 million acres each in Illinois, Michigan and Arkansas. Later, because the land of the Michigan Tract was so poor and almost worthless, the Illinois Tract was increased from 2 to  $3\frac{1}{2}$  million acres.—*Editor*

<sup>3</sup> This material was submitted by Mr. Frank W. Phillips, Dean of Men of Monmouth College, Monmouth, Illinois.



COUNTY	ORGANIZED	ORIGIN OF NAME
Peoria	1825	An Indian name
Stark	1837	Maj. Gen. John Stark, Revolutionary War
Knox	1825	Maj. Gen. Henry Knox, Revolutionary War
Warren	1825	Maj. Gen. Joseph Warren, killed at Bunker Hill
Henderson	1841	Henderson Creek
Mercer	1825	Gen. Hugh Mercer, Revolutionary War, killed at Princeton
<i>Parts of:</i>		
Henry	1825	Patrick Henry
Bureau	1837	Pierre Burro, trader
Putnam	1825	Gen. Israel Putnam, Revolutionary War
Marshall	1839	John Marshall, Chief Justice

"Pursuant to previous notice, physicians from the counties of Bureau, Henry, Knox and Stark met at Kewanee, May 22, 1866, to organize a district medical society." Nineteen physicians were present from the four counties. Temporary officers were selected and, after some little discussion, it was decided that a Constitution and By-Laws should be developed and adopted at this first meeting. The association was to be designated as the Military Tract Medical Association. Physicians in good standing in the counties of Bureau, Henry, Stark, Knox and Warren were to constitute the membership. Members were to be governed by the Code of Medical Ethics of the American Medical Association. Meetings were to be held twice a year, in the months of May and January. The following officers were elected:

President—A. H. Thompson, Princeton  
 Vice-President—H. Nance, Kewanee  
 Secretary-Treasurer—George H. Scott  
 Board of Censors:  
     N. Holton, Buda  
     J. M. Morse, Galesburg  
     V. C. Secord, Galva

Five official delegates to the Illinois State Medical Society were selected at this meeting. The initiation fee was set at \$1.00. It was decided that the second meeting would be held in Galesburg on the second Tuesday in December. At the second meeting, it was decided that the annual meeting would be held the second Monday in June, and the semi-annual meeting the second Tuesday in January.

Meetings were held regularly, the membership increasing as the number of counties increased. Gradually the counties of Peoria, Fulton, Henderson, Mercer, Rock Island, McDonough, Schuyler, Hancock and Adams were added to the list. Members were also approved from Keokuk, Davenport,

Fort Madison and other eastern Iowa cities, and from Hannibal and Louisiana, Missouri.

In keeping with many other early medical societies, committees were appointed on tuberculosis, obstetrics, medicine, surgery and therapeutics, each to report the latest developments in these respective fields during the preceding year.

Interest in the Association increased until about 1900 when the attendance at the semi-annual meetings began to decrease. A two-day meeting was held in Peoria in October, 1908, with Dr. S. C. Stremmel of Macomb as presiding officer. An excellent program had been arranged and Peoria physicians had planned an interesting schedule of entertainment for the members. In his closing remarks, Dr. Stremmel reported that it was becoming difficult to get enough members to the meetings to constitute a legal quorum; that membership dues for that year amounted to only \$18.00 and the expenses were \$90.00, and he believed it was time seriously to consider disbanding. After much discussion it was voted to disband or, at least, no definite date for a future meeting was set. The old officers were re-elected to wind up the affairs of the Association. A motion was made that any funds remaining in the treasury after the payment of all bills should be turned over to the Legislative Committee of the Illinois State Medical Society. The motion was unanimously approved.

The Military Tract Medical Association had been recognized by the Illinois State Medical Society as a participating organization and one entitled to send official delegates to its annual meetings each year. A list of these delegates, as shown in the minutes of the Association,<sup>4</sup> contain the names of several physicians who had been or would become the President of the State Medical Society and many others whose names have been prominent in the affairs of the Society.

*The Iowa and Illinois Central District Medical Association.*—During the summer of 1866, the Scott County (Iowa) Medical Society appointed a committee to investigate the possibility of organizing a medical society with members in eastern Iowa and western Illinois, within a radius of fifty miles of the Twin Cities. Letters were sent to physicians residing in this area, and on November 7, 1866, a large number of physicians met in Davenport and organized the Iowa and Illinois Central Medical Association. A Constitution and By-Laws were adopted, and officers were elected:

President: Patrick Gregg, Rock Island, Illinois  
Vice-President: P. J. Farnsworth, Clinton, Iowa  
Secretary: W. F. Peck, Davenport, Iowa  
Treasurer: T. J. Iles, Davenport, Iowa

<sup>4</sup> The complete minutes of the Military Tract Medical Association were presented to the Illinois State Medical Society. They are now safely housed in the archives of this Society at the John Crerar Library in Chicago.

Within a relatively short time, most of the physicians residing in Davenport, Rock Island, Moline, and surrounding towns in Illinois and Iowa were members. Meetings were held quarterly, rotating the place of meeting. At the second meeting, committees were appointed to report on prevailing diseases, obstetrics, surgery, medicine, new remedies and phthisis. Reports were given by these committees at each meeting. The Society still (1954) holds regular meetings with excellent programs and good attendance. It also publishes a bulletin regularly for its membership.

*North Central Illinois Medical Association.* In the spring of 1870, Dr. James Whitmire of Metamora issued a call to the physicians of Woodford County to meet in his office for the purpose of organizing a county medical society. At this meeting he was elected President and Dr. Cole of El Paso, Secretary. Annual meetings were well attended and held regularly, drawing physicians from adjoining counties. As there was no active society at that time in LaSalle County, several physicians from both LaSalle and Marshall Counties not only attended the meetings but applied for membership.

In 1872, the Marshall County Medical Society was organized, and it held frequent joint meetings with the Woodford Society. After several such meetings it was decided to organize a larger society, including more counties. At the close of a joint meeting held in Wenona on January 6, 1874, members of the joint society and from surrounding counties formed an association of counties "along the line of and adjacent to the Illinois Central Railroad." At this organization meeting, the following counties were involved: Woodford, Marshall, Putnam, Livingston, LaSalle. Others were added at subsequent meetings. The first officers elected were Dr. Whitmire as President; Dr. Kendall E. Rich, Wenona, Vice-President, and Dr. Cole of El Paso as Secretary-Treasurer.

A meeting was held on December 1, 1874, at which time By-Laws were adopted, and the name—North Central Illinois Medical Association—was accepted.

Dr. William O. Ensign, a past-President of the Illinois State Medical Society and for four years a member of the Council, was not only an organizer of this Association but served as its Secretary for a period of fourteen years.<sup>5</sup>

*Southern Illinois Medical Association.* In the fall of 1874, seven physicians met in the office of Dr. J. I. Hale in Anna, to consider the advisability of developing a medical society in this area to bring about a better understanding between the physicians of southern Illinois and for the advancement of scientific work in this area. These seven were Drs. F. M. Agnew, Makanda; J. I. Hale, Anna; H. C. Hacker, H. Schuchardt and W. C. Lence,

<sup>5</sup> Annual meetings of this Association are still held. In October 1953, Dr. George A. Dicus of Streator was elected for his 54th consecutive year as Secretary-Treasurer.



Jonesboro; F. S. Dodds, Anna, and W. L. McLane, Dongola. Dr. Hacker, then President of the Union County Medical Society, presided. He was instructed to send a call to the physicians of southern Illinois for a meeting to be held in Jonesboro in January, 1875. On January 20, 1875, the organization meeting was held. Dr. Hacker was chosen as President and Dr. Agnew as Secretary *pro tem*. Fourteen physicians were present. A committee was appointed by the President to draw up a suitable Constitution and By-Laws and, after their report was heard, the following officers were elected:

President: H. C. Hacker, Jonesboro  
1st Vice-President: H. Wardner, Cairo  
2nd Vice-President: John McLeace, DuQuoin  
Secretary: G. W. Schuchardt, Jonesboro  
Treasurer: W. C. Lence, Jonesboro

Meetings were held twice each year until 1901, when the By-Laws were amended to make it an annual meeting of two days. The Association has held meetings each year until more recently it was decided to make it a one-day affair. A list of the officers of this organization contains names of many who have been prominent in the affairs of the Illinois State Medical Society.

*Brainard District Medical Society* was organized on May 17, 1877, at Mason City. In 1878, three official delegates were sent to the annual meeting of the State Medical Society: Drs. L. L. Leeds, Lincoln; P. L. Diffenbacker and J. W. Newcomer of Havana. The maximum membership apparently was reached in 1895, when 57 members were enrolled. In 1900, the officers were Drs. F. M. Coppel of Havana, President, and Katherine Miller of Lincoln, Secretary. This year the Society was recognized by the Council of the Illinois State Medical Society.

Records still available show that there were a number of medical societies in Illinois a century ago which held only a few meetings, in a few instances perhaps only two or three, and then were disbanded. No information is available as to the exact time and place of their organization, officers, lists of members or other pertinent data.

It seems obvious that physicians in Illinois have always been interested in getting together for an interchange of ideas, and to discuss problems in diagnosis and treatment of prevailing ailments. In those days before the exact cause of infectious and contagious diseases was known, physicians, as they do today, had the best interests of their patients uppermost in their thoughts. The attendance at these early meetings was good, even though many hours were spent in going to the meeting and returning home. Occasionally one of these pioneer physicians ventured to predict what might happen to improve medical care and knowledge during the next century,

and it is almost uncanny to note how many of the things thus predicted have since actually been developed. Medicine has indeed kept pace with the developments in science, industry and the arts during the past century and will no doubt continue to maintain this record.

# APPENDIX

## MISCELLANEOUS NOTES

### ADDITIONAL BIOGRAPHIC SKETCHES

*Dr. John Evans.* Zeuch, in Volume I (page 211) of this series, has touched upon the life of Dr. John Evans. However, since he was one of the truly great men of the period 1850 to 1900 and since his accomplishments fall largely within that span of years, it seems proper to include a brief review of his career in this, the second volume of the series.\*

Dr. John Evans was born of Welsh Quaker parents at Waynesville, Ohio, in 1814, the oldest of 13 children. His father had a large farm and a store which he wanted John to carry on. But John was restless and had other ambitions. He wanted a higher education, and went to a small academy at Richmond, Indiana. The next year, at his father's advice, he went to a Quaker school for Boys at Gwynedd, near Philadelphia. But he soon rebelled at this and the following year, 1836, attended Lynn Medical College in Cincinnati, Ohio, from which he graduated in 1838.

With his diploma from college and with a pony, saddle and bridle, and \$10 from his father, he started West to the wilds of Indiana, and located in Attica where he began to practice medicine in 1839. He remained here six years which were perhaps the most important years of his life. It is said that here he met Abraham Lincoln who, years later, became his close friend and who, by appointing him Governor of the Territory of Colorado, diverted him into an entirely new field of activities. When at Attica, Evans also began his work in connection with insane hospitals. This resulted in the erection of the first Insane Hospital in Indiana, and the first one in the West beyond Columbus, Ohio. He became its first superintendent in 1844.

It is interesting merely to enumerate the various activities in which this remarkable man soon became involved. While still in Indiana, he became lecturer in obstetrics in Rush Medical College in Chicago, going back and forth for three years. In 1848, he settled in Chicago. He became Editor of the *Northwestern Medical and Surgical Journal*; his editorials covered a wide range of medical subjects and were widely read. With Dr. N. S. Davis, he was a co-founder of the American Medical Association, the Chicago Medical Society (1850) and the Illinois State Medical Society (1850). He became a member of the Chicago City Council. He founded the first

\* Extracted from "Quakers and Medicine" by Dr. D. J. Davis, *Bull. Soc. Med. History of Chicago*, 4:77, 1928.



high school in Chicago and inaugurated the present educational system in this city. From 1853-55 he was active in founding Northwestern University, and became the first President of its Board of Trustees, a position he held until his death in 1897. He was responsible for the passage of a bill in the State Legislature exempting Northwestern University from taxation and granting valuable lands to it. He, himself, gave \$180,000 to it, and his name was given to the site of the University, namely Evanston. He was the organizer of the Hospital of the Lakes, which later became Mercy Hospital. He was interested in the development of railroads and raised funds to build the Chicago Ft. Wayne Railroad, which later became the great Pennsylvania System. He is said to have been responsible for the location of the terminal of this road at the Union Station. All this time he was an active practitioner of medicine and Professor of Obstetrics in Rush Medical College. In the early sixties he became interested in national politics. He was a zealous Republican and was a member of the convention that nominated Lincoln in Chicago. His friendship with Lincoln resulted in his appointment as Territorial Governor of Colorado. This was an important as well as a very difficult position to fill, for the great West was developing rapidly and the Indian problem was acute at the time of the Civil War. For the next thirty-five years his activities were centered in Colorado and he observed, and was in certain ways responsible for, its development from a wilderness into the great state of today. He built a railroad from Cheyenne to Denver (Union Pacific) and thus put Denver on the map. He opened mines, installed street cars in Denver, started towns, founded the Denver University and gave to it \$150,000 besides land, and was President of its Board of Trustees until he died. A business block and a public school in Denver were named after him. One of the highest and most massive peaks of the Rockies in Colorado bears his name—Mount Evans—by legislative action. In memory of his wife who died early, he built the large Lawrence Street Methodist Church of Denver. A splendid picture of him hangs in the Capitol in Denver.

*Dr. N. S. Davis.* "As I last saw him, he was walking north toward his home on a summer day after his work in the office. He was then over eighty. His spare form, strong face, erect figure and brisk step would attract attention without the tall silk hat and the swallowtail coat that he always wore. There was dignity in his look and carriage, self-reliance, force. Knowing as I did by that time of some of his major accomplishments, I thought then and I think the same now that I was looking at one of the giants in the medical world of those days, a true physician and a true gentleman of the old school. As such I have tried to portray him." \*

\* From a paper written by Dr. James B. Herrick, published in the *Bulletin of the Society of Medical History of Chicago*, 4:403, 1935.

*Dr. Nicholas Senn.* For a biographic history of Dr. Senn, master surgeon, pathologist and teacher, the reader is referred to the monograph "Nicholas Senn, 1844-1908" by Ella M. Salmonsens published in the *Bulletin of the Society of Medical History of Chicago*, 4:268, 1933.

#### COLLECTIONS OF PORTRAITS OF PHYSICIANS IN ILLINOIS

1. Dr. Carl E. Black Collection—Illinois State Library and Museum, Springfield, Illinois.
2. Collection of the Institute of Medicine of Chicago—John Crerar Library Building, including photos in the Proceedings of the Institute.
3. Collection in the Chicago Historical Museum, Lincoln Park, Chicago, originally in the possession of the Society of Medical History of Chicago.
4. Photographs of the Presidents of the Illinois State Medical Society published in the May 1940 issue of the *Illinois Medical Journal*.
5. Photographs of many eminent physicians who at some time were associated with the State Department of Public Health.—"The Rise and Fall of Disease in Illinois" by Dr. I. D. Rawlings, 1927.
6. A comprehensive collection of portraits of physicians and photographs of colleges in Illinois, covering especially the latter half of the 19th century appears in "Medical and Dental Colleges of the West: Historical and Biographical," edited by H. G. Cutler (formerly of the Newberry Library), The Oxford Publishing Co., Chicago, 1896. This is an indispensable historical contribution for the period of approximately 1850 to 1900 (Volume II).
7. Collections of photographs and plaques of physicians, faculty members and others eminent in the medical profession are to be found in the libraries and class rooms of the several medical colleges in Chicago. All are catalogued and accessible for inspection.
8. Collection of portraits and plaques of physicians and scientists in the John Crerar Library, Chicago.
9. A compact history of Rush Medical College, together with a large number of portraits of the faculty members for the past century may be found in "The Story of Rush Medical College" by Dr. E. E. Irons, published by Rush Medical College, 1953, p. 80.

#### IMPORTANT EARLY MEDICAL DISCOVERIES IN ILLINOIS

*Anastomosis of Blood Vessels.* In 1896-97, Dr. John B. Murphy of Chicago accomplished the first successful circular anastomosis of blood vessels. This is the only item from Illinois mentioned by Garrison in his list of global medical discoveries before 1900.\*

*Stomach Diagnosis with X-ray and Bismuth Emulsions.* Just at the close

\* Garrison, Fielding H.: *History of Medicine*, Philadelphia, W. B. Saunders Co., 1914, p. 706.

of the century (1899), Dr. Walter B. Metcalf of Chicago announced his observations on the value of X-ray diagnostic studies on the stomach and other body cavities when filled with a special bismuth emulsion prepared by himself, thus rendering them impervious to the Roentgen rays. His paper was first read before the Chicago Medical Society and later published in the *Philadelphia Medical Journal*, August 26, 1899. These observations, it will be noted, were made less than four years following Roentgen's original discovery of X-rays in 1895.

#### COUNTY MEDICAL SOCIETIES

A statement that will bear repeating was made by Dr. George W. Jones of Danville at the meeting of the Illinois State Medical Society in 1881, more than a half century ago: "In each county let there be a well organized, regularly attended medical society, even if composed of no more than five members. Let there be unity of action in the premises, and require each applicant for membership in the profession to become the student of the society into which he is admitted upon some settled basis of membership. I have an abiding faith in medicine, my friends, a trust that is growing stronger with each revolution of the seasons." That there is an interest in the early history of the county medical societies of Illinois is evident by the following records:

*Cook County.* As Volume II is going to press, an official committee of the Chicago Medical Society has been appointed to prepare a history of the Society from its inception to the present date.

*Hancock County.* An interesting and well written chapter of early Illinois medical history appeared in the *Carthage Republican* on December 10, 1952. Entitled "Pioneer Doctors from Saddle Bag to Horse and Buggy" and written by Mary H. Siegfried of Denver, Illinois, it includes the Mormon episode with its accompanying tragedies, in which several prominent doctors then practicing in the locality were involved.

*Henry County.* Sketches of early Illinois physicians in Henry County were compiled by Dr. P. J. McDermott for the Centennial Records of the Illinois State Medical Society.

*Lawrence County.* Dr. Tom Kirkwood, Lawrenceville, Illinois, has prepared a monograph on the "History of Lawrence County, Illinois," which is replete with medical data concerning the early eastern and Wabash sections of Illinois. The material has not been published but is on file in the John Crerar Library in Chicago.

*Peoria County.* "A Chapter in the Pioneer Period of Medicine in Illinois" (including Fort Clark), written by Dr. O. B. Will, may be found in the *Bulletin of the Society of Medical History of Chicago*, October 1911, Vol. 1., No. 1.

*Pike County.* Items pertaining to early medicine in Pike County may be



found in *My Second Life* by Dr. Thomas H. Shastid, Ann Arbor, Mich., George Wahr, 1944.

*Rock Island County.* The story of 130 years of medicine in a western county of Illinois, *The Doctors Story*, was written by Dr. Paul P. Youngberg and members of his committee. This book, printed by the Augustana Book Concern of Rock Island, was sponsored by the Rock Island Medical Society and contains photographs of the past Presidents of that society.

*Warren County.* Dr. Charles P. Blair of Monmouth, Illinois, for several years has had in preparation a medical history of Warren County. Its completion has been delayed by various eventualities, one of which was the partial destruction of his home by fire. Fortunately, his manuscripts and papers were saved. For years Dr. Blair has been a member of the Council of the Illinois State Medical Society and a resourceful member of the Committee on Medical History.

## ADDITIONAL REFERENCES

### GENERAL

The student of medical history will find much valuable material in the following references which were used frequently in the preparation of Volume II of this series but which contain a wealth of data not herein included:

The *Transactions* of the Illinois State Medical Society, 1850-1899 and the *Illinois Medical Journal*, 1899 to date. The May 1940 issue of the latter publication contains a complete summary of the early organization of the society and a brief summary of the Transactions, together with a list of officers and meeting places since its inception; also the photographs of the Presidents, with few exceptions, since 1840. It is an invaluable source of medical historical data for the Midwest.

*Bulletin of the Society of Medical History of Chicago*, 1912 to date: A periodical replete with Illinois and Chicago medical historical data which is thoroughly indexed. In 1933, Vol. 4, No. 3, p. 324 is a detailed account by Dr. George H. Weaver of the collection of the Society of Medical History of Chicago together with a copy of the agreement entered into between the Chicago Historical Society and this society. By this agreement, the rather extensive collection of books, pictures, photographs, instruments and miscellaneous objects and papers of the Society of Medical History were placed for permanent preservation with the Chicago Historical Society.

*History of Medicine and Surgery in Chicago*: Cook County Medical Records, published in 1922, is filled with medical historical data concerning Chicago particularly during the past century.

*The Rise and Fall of Disease in Illinois* by Dr. I. D. Rawlings and published by the Illinois State Department of Public Health in 1927, is primarily an account of transmissible diseases in Illinois covering the Indian, French, British, Spanish and American periods. It is illustrated by numerous charts and tables and is adequately indexed. This volume furnishes one of the indispensable bases for the study of medical history in Illinois. Reference has been made to it again and again in the text of Volume II.

*Diseases of the Mississippi Valley*: Part I, 1850, Part II, 1854, by Dr. Daniel Drake. This is a monumental study of early geographical medicine in the great Central West. It is both historical and descriptive. Dr. Drake at that time was the most eminent physician in this country, and again and again reference has been made to his contributions in these pages of Volume II.

*Paleopathology* by Roy L. Moodie, Ph.D., printed by the University of Illinois Press in 1923. In this volume Dr. Moodie, a noted paleopathologist and anatomist at the University of Illinois College of Medicine, presents many ancient evidences of disease, together with pertinent illustrations.

#### SPECIAL

The following references will provide equally valuable information on medical historical data but of a less general nature:

*Early Medical Chicago* by Dr. James Nevins Hyde, published in 1879, by the Fergus Printing Company of Chicago. One of the earliest and perhaps the best medical history of Chicago, containing data relating to the Fort Dearborn massacre, the early practitioners of Chicago, the early medical schools, and the diseases of the last century.

*The Work of the Physicians During the Chicago Fire (1871)* by Dr. John W. Williams, a participant, published in the Bulletin of Medical History of Chicago, Vol. 2, 1922. A quotation: "Words cannot express the scenes of unutterable chaos, distress and misery which we witnessed." A first-hand report by a physician of Chicago's greatest disaster.

*The Epidemics of Chicago* by Dr. John B. Hamilton, published in the Bulletin of the Society of Medical History of Chicago, Vol. 1, 1911. This paper was written by Dr. Hamilton about one year before his death in 1898. It was his intention to write a complete history of the epidemics of Chicago, of which this was to be an introductory chapter. Dr. Hamilton was a member of the faculty of Rush Medical College and for a time was Surgeon General of the U.S. Public Health Service.

*Beginnings of Medical Education in and near Chicago: The Institutions and the Men*, a research monograph of great value written by Dr. George H. Weaver and published in the Bulletin of the Society of Medical History of Chicago, Vol. 3, 1925. Details are given of the early history of five medical

colleges in Illinois together with an invaluable collection of early medical biographies and photographs of Illinois doctors.

*Loyola University School of Medicine:* Dr. R. M. Strong was officially designated by the faculty to write the history of the Loyola University School of Medicine. This was completed during 1954 and a copy has been deposited in the John Crerar Library in Chicago. The monograph includes the early history of Bennett Medical College which was the institution antecedent to Loyola College in Chicago.

*Illinois in the Fifties* (1851-1860) was written in 1918 by Dr. Charles B. Johnson, who was a graduate in medicine of the University of Michigan following his service in the Union Army during the Civil War. For many years he was a well known doctor, living in Champaign and practicing there as well as throughout the state. He was the author of *Muskets and Medicine*, *Medicine in Champaign County*, *Sixty Years in Medical Harness*, as well as many historical papers.

*Old Illinois Houses*, written by John Drury and published by the Illinois State Historical Society in 1948, is a volume of historic Illinois houses covering the last century. It was in such homes that the doctors visited their patients and in some of which they themselves lived. On page 79 is the house of the renowned Dr. William Fithian of Danville, Illinois, built by him in the 1830's. From its porch, Lincoln delivered an inpromptu address while a guest there in 1858. This house was used as the Frontispiece of the 1953 issue of the Journal of the Illinois State Historical Society, and a concise biography of Dr. Fithian accompanies the illustration.

*The Family Doctors of the Lincoln Family in Springfield* (Lincolniana Notes: Journal of the Illinois State Historical Society 47:57, 1954). Dr. William S. Wallace, the brother-in-law of Mrs. Lincoln, served for years as the Lincoln family doctor. Especially was he called when the children were ill. He was well known and popular in the community. A brief biographical sketch of him is given in Volume I of this series.

Less well known was his office partner, Dr. P. H. Bailhache, who, as a young man, came to Springfield in 1857 after graduating from the Pennsylvania Medical College. His brother, W. H. Bailhache, was at that time Editor of the Illinois State Journal. Dr. Bailhache served the Lincoln family in Dr. Wallace's absence from the city. During the Civil War he was given several assignments. In 1863, he became Surgeon of the 14th Illinois Cavalry which he served until mustered out in 1865. After the war he was associated with the Marine Hospital Service until his death in 1919.



# INDEX

- Abbott, Dr. —, 494  
 Abbott, Dr. W., 483  
 Abington, 187  
 Abt, Dr. Isaac A., 246; Biography of, 250  
 Acetate, Potassium, 120, 124  
 Acid, Carbolic, 123-125, 128, 137; Hydrochloric, 140; Muriatic, 126; Pyroligneous, 111; Salicylic, 127  
 Ackerknecht, Dr. Erwin H., 19, 20, 150  
 Aconite, 111, 132, 134, 139  
 Adams, Dr. A. L., 261, 267; Biography of, 275  
 Adams, Dr. Charles, 476  
 Adams, Dr. David, 106, 493  
 Adams County, 46, 47, 53; Medical Society, 53, 54, 492  
 Aedes Mosquito, 20  
 Aesculapian Society of the Wabash Valley, 55, 71, 493-495  
 Agnew, Dr. F. M., 499, 500  
 Ague, 18-20, 27-29  
 Albin, Dr. G. W., 494  
 Albion, 41, 110, 112, 115, 493  
 Albutt, Dr. Clifford, 123  
 Alcoholic Liquors, 32, 35, 114, 139; Essays on, 39  
 Alkaloidal Clinic, The, 483  
 Allaire, Dr. P. A., 114  
 Allen, Dr. E. T., 287  
 Allen, Dr. George T., 163  
 Allen, Dr. Jonathan A., 119, 418, 420, 421, 458  
 Allen, Dr. P., 290  
 Allport, Dr. Walter W., 201, 422  
 Amendments to the Constitution, 41-43, 48, 49, 54, 55  
 American Alkatometry, The, 487  
 American College of Medicine and Surgery, 452  
 American Dental Association, Journalism, 480  
 American Electro-Clinical Record, 486  
 American Gynecological Society, 219  
 American Homeopath, The, 484  
 American Hospital Association, Chicago, 480  
 American Journal of Clinical Medicine, 483, 487  
 American Journal of Materia Medica, 481  
 American Journal of Medical Sciences, 227  
 American Laryngological Association, 301  
 American Medical Association, 40, 42, 43, 48, 52, 54-58, 61-66, 68, 74, 76-78, 80, 82-85, 90, 96, 108, 113, 137, 139, 171, 260, 492; First Woman Delegate, 66; History of Anatomy Laws, 381; Medical Education, 414, 439; Medical Journalism, 480, 484-486; Publications, 97; Registration Law, 47; Specialism, 96, 97  
 American Medical Association Journal, 111  
 American Medical Colleges, Association of, Journalism, 480  
 American Medical Hydrology Journal, 486  
 American Medical Missionary College, 1895, 454  
 American Neurological Association, 97  
 American Otological Society, 301  
 American Pediatric Society, 240  
 American Pharmaceutical Association, 113  
 American Physician, The, 484  
 American Surgical Association, 191, 199-201  
 Amerinds, 12  
 Amerman, Dr. George K., 204, 300  
 Ammonium Bromide, 121  
 Anastomosis of Blood Vessels, 208, 504  
 Anatomy Laws in Illinois, History of, 361-402  
 Ancona, 135  
 Anderson, Dr. W. C., 106  
 Andrew, Dr. E., 42, 43  
 Andrews, Dr. C. N., 115, 220, 388  
 Andrews, Dr. E. Wylls, 162, 183, 184, 193, 196, 201  
 Andrews, Dr. Edmund, 69, 117, 135, 159, 162, 163, 167-169, 173, 178, 179, 182, 183, 188, 190, 192, 193, 198, 199, 226, 288, 289, 332, 343, 346, 347, 426-428, 433, 471  
 Andrews, Dr. Frank, 190  
 Anesthesia, 158, 159, 166, 169, 175, 221, 225, 226, 231, 232  
 Angear, Dr. J. J. M., 137, 438  
 Angle, Dr. Paul M., 26  
 Animal Oils, 109  
 Anna, 483, 499, 500  
 Annalist, The, 405  
 Annals of Surgery, The, 188  
 Annual of Eclectic Medicine and Surgery, 487  
 Anopheles Mosquitoes, 19  
 Antesdale, Edwin S., 288  
 Anthony, Dr. —, 308  
 Anthropologist, Alex Hrdlicka, 16

- Antifebrin, 138, 139  
 Antipyrine, 138, 139  
 Antiseptic Surgery, 183, 184, 188, 190, 345-347  
 Antiseptics, 166  
 Antitoxins, 144, 147  
 Aortic Tourniquet, 177  
 Appendicitis, 105, 193  
 Archives of Dermatology and Syphilology, 484  
 Armor, Dr. S. G., 404, 405, 494  
 Armstrong, Dr. P. M., 373  
 Arsenic, 111  
 Aseptic Surgery, 183, 184  
 Ashburn, P. M., 20  
 Ashhurst, Dr. John, 198  
 Asiatic Cholera, 27  
 Association of American Medical Colleges, Journalism, 480  
 Astoria, 139  
 Asylum for the Education of the Deaf and Dumb, 300  
 Atlanta, 77, 187  
 Atwood, Dr. Eugene S., 308  
 Aurora, 47, 60, 114, 117, 160, 495  
 Austrian Empire, Educational Statistics, 69  
 Ayers, C. G., 474  
  
 Babcock, Dr. Robert H., 136, 137, 195, 196  
 Bacon, Dr. C. S., 216  
 Bacon, Samuel, 266  
 Bacteria Lectures, 102, 104  
 Bacteriology, General Practitioner, 102; Medical, 343-360  
 Bacteriology in the Medical Curriculum, 356, 357  
 Bacteriology in the Service of Public Health, 357-360  
 Bacteriology prior to the Organization of Bacteriologic Teaching, 343-355  
 Bailhache, Dr. P. H., 508  
 Baines, Dr.—, 46  
 Baldwin, Dr. L. Blake, 309  
 Ball, James M., 378  
 Ballenger, Dr. William Lincoln, 288, 301; Biography of, 302  
 Bandage, Martin, 178  
 Banga, Dr. Henry, 216, 346  
 Banks, Dr. Elisha C., 106, 493  
 Bannister, Dr. Henry M., 96, 315, 484; Biography of, 323  
 Barbiturates, Laws Regulating Sale of, 37  
 Bard, Dr. John, 370  
 Barnes, Dr. William, 193, 471  
 Barr, Dr. J. C., 101  
 Barrett, Dr. William M., 190, 331, 337  
  
 Bartlett, Dr. John, 126, 468  
 Barton, Dr. G. C., 106  
 Bateman, Dr. Newton, 128  
 Bates, Dr. Mary E., 446  
 Baum, Dr.—, 309  
 Baum, Dr. Wilhelm, Medical Library, 470  
 Baxter, Dr. A. J., 139, 140  
 Bayley, Dr. Richard, 372  
 Beach, Dr. R. E., 483  
 Beard, Dr. C. H., 259; Biography of, 272  
 Beck, Dr.—, 386  
 Beck, Dr. Carl, 201  
 Beck, Dr. Joseph Carl, 285  
 Beeson, Dr. B. Barker, 306  
 Behrens, B. M., 286  
 Belfield, Dr. William T., 134, 135, 344, 347-349, 356, 422  
 Belladonna, 124, 134  
 Belleville, 70, 131, 490  
 Benedict, Dr. N. B., 117  
 Bennett College of Eclectic Medicine and Surgery, 451, 452, 483  
 Bennett Eclectic School, 285  
 Bennett Medical College, 284, 309, 452  
 Benson, John A., 409, 410, 439  
 Berard, Henry W., 288  
 Bernard, Dr. Claude, 117  
 Besharron, Dr. J. H., 264  
 Bettman, Dr. Boerne, 261, 265, 266, 284-286, 288, 439; Biography of, 270, 271  
 Bevan, Dr. Arthur D., 168, 182, 201, 421  
 Bevan, Dr. Thomas, 163  
 Bi-County Medical Society of Kane and McHenry Counties, 495  
 Biggsville, Dr. Maxwell, 182  
 Billings, Dr. Frank, 83, 140, 141, 143, 355, 471, 480  
 Billings, Dr. J. S., 127  
 Biographies, Dermatologists, 309-313; Miscellaneous, 502-504; Neuropsychiatrists, 316-328; Ophthalmologists, 267-278; Otolaryngologists, 301-305; Pediatricians, 248-250; Surgeons, 204-209  
 Bio-Medical Library of the University of Chicago, 462, 463  
 Bird, Dr. J. Herman, 492  
 Birney, Dr. Samuel J., 240  
 Birth Registrations, 37, 38, 46, 47, 49, 50, 53  
 Bishop, Dr. Dennis D., 144, 309  
 Bishop, R. W., 408  
 Bishop, Dr. Seth Scott, 263, 286, 287, 296-298; Biography of, 302  
 Bissel, Dr. William H., 85  
 Bitter Barks, 39, 113  
 Black, Dr. Carl E., 142, 149, 189, 195, 471  
 Black, Dr. G. V., 186, 331, 333, 335, 350, 351

- Blackman, Dr. F. H., 495  
 Blackwell, Dr. Elizabeth, 442  
 Blair, Dr. Charles P., 506  
 Blake, Dr. S. C., 204, 444  
 Blanchard, Dr. Wallace, 199  
 Blaney, Dr. J. V. Z., 36, 42, 43, 46, 113, 156, 404, 418-420, 471, 481, 492  
 Blatchford, Dr. Sam T., 113  
 Bleeding as a Treatment, 103, 104, 109  
 Blessing Hospital, 466  
 Blind, Care of, 266, 267  
 Blindness, Prevention of, 266, 267  
 Block, Dr. —, 188  
 Blood Bank, 176  
 Blood Vessels, Anastomosis of, 208, 504  
 Bloodletting, 176  
 Bloomington, 42, 51-53, 61, 63, 73, 77, 85, 114, 130, 163, 172, 173, 180, 194, 330; Medical Society, 492  
 Boal, Dr. Robert, 72, 85, 333, 495  
 Board of Health, 64-67, 71, 76, 104, 116, 122, 129, 177, 288  
 Bogue, Dr. Roswell G., 69, 128, 167, 182, 444  
 Book Collections after 1850, Private, 467-471  
 Boone, Dr. Levi D., 491, 492  
 Boone County, 44  
 Booth, Dr. David S., 185, 225, 331  
 Botanic, 102, 103  
 Botsford, Dr. Harriett, 66  
 Bouffleur, Dr. Albert L., 196, 201, 487  
 Boyd, Dr. H. W., 255  
 Boyer, Dr. Valentine A., 457  
 Boyle, Dr. J. M., 107, 493  
 Bradley, Dr. C. C., 494  
 Bradley, Dr. E. H., Biography of, 277  
 Brainard, Dr. Daniel, 40, 103, 113, 156, 159-162, 164, 197, 201, 204, 330, 339, 404, 406, 417-419, 471, 481, 482, 492, 491; Biography of, 204, 205  
 Brainard District Medical Society, 71, 500  
 Brandom, Dr. P. A., 277  
 Brandy, a Stimulant, 110  
 Breed, Dr. S. P., 126  
 Brennemann Library, 472  
 Brewer, Dr. Carrie, 446  
 Bridde, Dr. Otto, 301  
 Bridge, Dr. Norman, 70, 126, 136, 137, 190, 416, 421, 443, 467, 476, 483  
 Brinckerhoff, Dr. G. Erwin, 265  
 Brobst, Dr. C. H., Biography of, 277  
 Brodie, Dr. William, 63  
 Bromides, 119, 121, 124, 134  
 Bromine, 121  
 Brophy, Dr. Truman, 333, 335-338, 422  
 Brower, Dr. Daniel Roberts, 85, 86, 138, 142, 143, 240, 315, 421, 445, 446, 448; Biography of, 319  
 Brown, Charles F., 288  
 Brown, Dr. E. J., 87  
 Brown, Dr. E. V. L., 21, 263, 264  
 Brown, Dr. Everett, 142  
 Brown, J. R., 288  
 Brown, Miss Mary E., 474-477  
 Brown, Dr. Moreau R., 286, 288, 301  
 Brown, R. H., 288  
 Brown, Dr. Sanger, 89, 315, 422; Biography of, 324, 325  
 Browne, William H., 438  
 Brown-Sequard, Dr. E., 120, 199  
 Brownsville, 490  
 Broyles, Dr. H. B., 107  
 Bryd, Dr. William A., 78  
 Buckingham, James S., 30-32  
 Buckmaster, S. B., 409, 410  
 Buda, 497  
 Buffum, Dr. J. H., 284, 296  
 Buley, R. C., 5  
 Bulkley, Dr. Henry Daggett, 306  
 Bull's Method, 179  
 Bulletin of the Rush Medical College Alumni Association, 487  
 Bulletin of the Society of Medical History of Chicago, 506  
 Bunker Hill, 88  
 Burget, Dr. David, 107  
 Burmaster, Dr. Paul, 287  
 Burrill, Thomas J., 102, 354, 360  
 Burrows, Mrs., 475  
 Bush, Dr. Bertha E., 447  
 Bushnell, Kate C., 445  
 Butler, Dr. George F., 146, 147  
 Byford, Dr. Henry T., 219, 421  
 Byford, Dr. William H., 65, 116, 197, 217-219, 221, 399, 417, 418, 427, 428, 442-445, 447-449  
 By-Laws and Constitution, 37, 38, 58, 79, 81  
 Byrd, Dr. William Andrew, 77, 137, 187, 200, 469, 470  
 Cadman, Dr. A. W., 62  
 Cadwalader, Thomas, 371  
 Cahokia, 146  
 Cairo, 20, 90, 483, 500  
 Calcium, 134, 147  
 Caldwell, Dr. W. B., 106  
 Calhoun County, Trachoma in, 21  
 Calomel, 110, 112, 114, 115, 119, 121  
 Camp, Dr. Harold M., 489  
 Camp Douglas Military Hospital, 51  
 Campbell, Dr. James T., 286, 301



- Campbell, Dr. Ralph R., 308  
 Canton, 235, 492  
 Carbolic Acid, 123-125, 128, 137  
 Carbon Dioxide, 138  
 Caries, 23, 24  
 Carlinville, 36, 66, 80, 293  
 Carpenter, Mrs. A. A., 479  
 Carr, Dr. E. C., 418, 419  
 Carroll, Dr.—, 147  
 Carter, Dr. J. M. G., 136, 140, 142, 146, 240, 439  
 Carthage, 188; Medical Society, 492  
 Carthage Republican, The, 505  
 Casal, Dr. F. M., 240  
 Case, Dr. C. S., 334-336  
 Case, Dr. Lafayette W., 308  
 Cass County Medical Society, 492  
 Casselberry, Dr. W. E., 299, 301; Biography of, 302  
 Castle, Dr. Alfred, Medical Library, 456  
 Castleton Medical College, 371  
 Catlin, Dr. A. M., 494  
 Catterton, Dr. Dyer, 106  
 Cauthorn, Dr. Gabriel T., 106  
 Censors, Board of, 55  
 Census of 1860, 47, 48  
 Centennial Medical Society, 71  
 Center, Dr. Charles D., 147  
 Central District and Central Illinois Medical Societies, 71  
 Central Free Dispensary, 294, 308, 422  
 Cerebrospinal Meningitis, 119  
 Chaddock School of Medicine, 453  
 Chamberlain, Dr. W., 385  
 Chamberlain, Dr. William O., 494, 495  
 Chambers, Dr. A. R., 41, 64  
 Chambers, Dr. Thomas N., 118  
 Chambers, Dr. William M., 128, 159, 220, 494  
 Champaign County Medical Society, 492  
 Chapman, Dr. Chandler Burwell, 404; Biography of, 206  
 Chapman, Dr. G. H., 138  
 Charitable Illinois Eye and Ear Infirmary, 21  
 Charleston, 159, 220, 492, 494  
 Chatham, 120, 121  
 Chatham, Dr. J. B., Medical Library, 471  
 Chatin, 23  
 Cheever, Dr.—, 179  
 Cheney, Dr. B. H., 223  
 Chenoweth, Dr. William J., 192, 240, 483  
 Chicago, 29, 39, 40, 44, 45, 51, 55-57, 61, 62, 65, 66, 70-72, 74, 75, 77, 78, 80, 82, 83, 109-111, 113, 114, 116, 119, 121, 122, 125, 126, 128, 129, 131, 133-135, 141-143, 159, 163, 190, 284; American Hospital Association, 480; Brown-Sequard Lectures, 199; Charitable Illinois Eye and Ear Infirmary, 21; Chiropodists, 69; College of Liberal Arts, 407; College of Physicians and Surgeons, 102, 264; 431-441; Columbian Exposition, 80, 81, 478; Drinking Water, 33; Ephephta School for the Deaf, 300; Epidemics, 4, 5; Fire of 1871, 60; Geography of, 7, 9; History of Bacteriology, 343-360; Illinois Training School for Nurses, 473; Infant Mortality, 104; McCowen Oral Home School for Deaf Children, 300; Medical Journalism, 480-488; Medical Schools, 155-157, 449-454; Milk Inspection, 124; Mosquitoes in 1840, 30; Necropsy, 1844, 339; Sanitation, 33, 34, 109, 110; Smallpox Hospital, 239  
 Chicago Academy of Science, 391  
 Chicago Astronomical Society, 391  
 Chicago Biological Society, 345  
 Chicago Climatological and Otological Society, 301  
 Chicago Clinic, 486-488  
 Chicago Clinic and Pan-Therapeutic Journal, 486  
 Chicago Clinical School, 486, 488  
 Chicago Clinical and Pure Water Journal, 486  
 Chicago College of Dental Surgery, 350, 423  
 Chicago College of Medicine and Surgery, 452  
 Chicago College of Pharmacy, 482  
 Chicago College of Physicians and Surgeons, 285  
 Chicago Dental Infirmary, 422  
 Chicago Dermatological Society, 309  
 Chicago Eclectic Medical College, 452  
 Chicago Eye and Ear Infirmary, 55, 253, 283, 299  
 Chicago Eye, Ear, Nose and Throat Hospital, 266  
 Chicago Foundlings Home, 481  
 Chicago Gynecological Society, 291  
 Chicago Health Department, 144  
 Chicago Historical Society, 391, 466, 483  
 Chicago Homeopathic Medical College, 284, 351, 450, 451  
 Chicago Homeopathic Medical Society Transactions, 483  
 Chicago Hospital for Women and Children, 245, 442  
 Chicago Hospital of Medicine, 454

- Chicago Journal of Health, 487  
 Chicago Journal of Nervous and Mental Diseases, 484  
 Chicago Laryngological and Otological Society, 301  
 Chicago Literary Club, 391  
 Chicago Lying-In Hospital, 218, 219  
 Chicago Maternity Hospital, 218  
 Chicago Medical College, 50, 51, 55, 69, 133, 156, 163, 190, 198, 214, 216, 217, 286, 309, 349, 353, 354, 390, 418, 420, 421, 425-432  
 Chicago Medical Examiner, 171, 345, 482  
 Chicago Medical Gazette, 484  
 Chicago Medical Journal, 46, 118, 197, 198, 481, 482  
 Chicago Medical Journal and Examiner, 129, 137, 138, 198, 199, 341, 347, 481  
 Chicago Medical Library Association, 465, 466, 469  
 Chicago Medical Observer, 488  
 Chicago Medical Recorder, 341, 487  
 Chicago Medical Register, 483  
 Chicago Medical Register and Directory, 483  
 Chicago Medical Reporter, 486  
 Chicago Medical Review, 484  
 Chicago Medical School, Medical Library, 460  
 Chicago Medical Society, 63, 108, 112, 138, 199, 301, 340, 341, 349, 350, 354, 460, 465, 474-474, 486, 487, 491, 492, 505  
 Chicago Medical Times, The, 483  
 Chicago Neurological Society, 315  
 Chicago Night University, 453  
 Chicago Northwestern College, 454  
 Chicago Ophthalmological Society, 251, 262, 271  
 Chicago Ophthalmologists, 267-275  
 Chicago Orthopedic Society, 89  
 Chicago Pasteur Institute, 355  
 Chicago Pathological Society, 340-342, 344, 347  
 Chicago Physio-Medical College and Institute, 286, 452  
 Chicago Policlinic, 216, 265, 285, 308, 468  
 Chicago Public Library, 465, 471, 472  
 Chicago Society of Physicians and Surgeons, 199  
 Chicago Surgical Society, 201  
 Children's Memorial Hospital, 246, 472  
 Chiropodists, 69  
 Chisholm, Dr. Julian T., 259  
 Chloral Hydrate, 124, 132  
 Chlorate of Potassium, 147  
 Chloride, Potassium, 124  
 Chloroform, 114, 158, 159, 169, 173, 175, 198, 221, 225, 226, 231, 232  
 Cholera, 8, 27, 110-114, 121, 122, 151, 204  
 Christian County, 467  
 Christopher, Dr. Walter Shield, 438, 439; Biography of, 249  
 Chronic Diseases, Journal of, 488  
 Church, Dr. Archibald, 315, 487; Biography of, 326, 327  
 Churchill, Dr. Frank Spooner, Biography of, 249, 250  
 Cincinnati, 17, 30-34, 103, 144, 485  
 City Hospital, 217  
 Civil War, 4, 5, 201-203  
 Clark, Dr. A., 494  
 Clark, Dr. A. L., 128, 483  
 Clark, Dr. C. G., 494  
 Clark, Dr. D. G., 494  
 Clark, Dr. E. N., 494  
 Clark, Dr. L., 494  
 Clark County, Trachoma in, 21  
 Class, Dr. W. J., 360  
 Clay, Dr.—, 226  
 Cleanliness in Middle West, 30-35  
 Cleft Palate, Early Management of, 334-338  
 Cleveland, Dr. George Henry, 487  
 Clevenger, Dr. Shobal Vail, Biography of, 322, 323  
 Clevenger, Prof. S. F., 135  
 Clinical Association of Champaign and Urbana, 89  
 Clinical Medicine, 483, 487  
 Clinical Medicine and Surgery, 483  
 Clinical Reporter, 233  
 Clinical Review, 487  
 Clinique, 484, 486  
 Clinton, 46, 388, 492, 498  
 Cobb, Albert W., 475  
 Cocaine, 136, 138, 147  
 Cod Liver Oil, 112  
 Code of Ethics, First, 38  
 Colburn, Dr. J. E., 261, 263, 265, 301; Biography of, 272  
 Cole, Dr.—, 499  
 Cole, Julia A., 443  
 Coleman, Dr. George H., 108  
 Coleman, Dr. W. Franklin, 265; Biography of, 273  
 Coles County, 44; Medical Society, 492  
 Coley, Dr. William B., 195  
 Collections of Portraits of Physicians in Illinois, 504  
 College of Dentistry, University of Illinois, 431  
 College of Liberal Arts, 407

- College of Medicine, University of Illinois, 264, 433, 438, 440  
 College of Medicine and Surgery of Chicago, 309  
 College of Physicians and Surgeons, 102, 135, 264, 284, 305, 353, 356, 371, 403-405, 409-411, 413, 431-441, 487  
 Colles' Fracture, 168  
 Collins, Dr. Thomas Cresap, 106  
 Collinsville, 79  
 Collodion, 111  
 Columbian Dental Congress, 334  
 Columbian Exposition, 80-82, 411, 478  
 Columbus Memorial Library, 463  
 Communicable Diseases, 239-244  
 Compression Dressing, 170  
 Constitution Amendments, 41-43, 48, 49, 54, 55  
 Constitution and By-Laws, 37, 38, 58, 79, 81  
 Contagious Diseases, 239-244  
 Continental Congress, 88  
 Contract Practice, 45, 46  
 Cook, Dr. E. P., 66, 68, 73, 75, 76, 85, 122, 123, 129, 134, 188, 240, 256, 399  
 Cook County, Trachoma in, 266  
 Cook County Hospital, 55, 70, 128, 142, 167, 171, 175, 181, 182, 190, 200, 203, 204, 217, 246, 264, 295, 309, 339, 340, 344, 346, 347, 352-354, 445-447; Reports, 486; Student Nurses, 473; Training School for Nurses, 447  
 Cook County Insane Asylum, 448  
 Cook County Medical Records, 506  
 Cook County Medical Society, 112, 491, 505; Library, 465, 466  
 Coolidge, Dr. Frederick S., 201  
 Cooper, Dr. Elias S., 158, 252, 385, 388  
 Cooper Medical College, 388  
 Coppel, Dr. F. M., 500  
 Corbus, Dr. J. C., 240  
 Corliss, Dr. Hiram, 55  
 Coroner Law, 87  
 Corpuscle, The, 486  
 Corr, Dr. A. C., 90, 260, 333; Biography of, 275  
 Corr, Dr. Lucinda, 66  
 Corwin, Dr. Arthur M., 301  
 Cotton, Dr. Alfred Cleveland, Biography of, 248, 249  
 Coulter, Dr. H. H., 146  
 Coulter, Dr. J. Homer, 286, 299, 301, 332  
 Counties, Trachoma in, 21  
 County Medical Societies, 464-466, 491, 492, 505  
 Cox, Dr. George W., 146  
 Cox, Dr. W. C., 263  
 Crabb, Dr. J. J., 490  
 Craig, Dr. A. L., 135  
 Craig, Dr. J. R., 107  
 Crawford County, 21, 101  
 Crerar, Mr. John, 478  
 Crerar Library, John, 42, 464, 468-470, 472, 505  
 Crothers, Robert W., Medical Library, 468  
 Culbertson, Dr. J. C., Medical Journalism, 485  
 Cumberland County, Trachoma in, 21  
 Currier, Dr. John M., 380  
 Curtis, Dr. F. C., 125  
 Curtis, Dr. Lester, 193, 345, 354  
 Curtis, Dr. Romain J., 102, 356  
 Cutler, H. G., 414  
 Cutter, Dr.—, 179  
 Daggett, Dr. John F., 382, 383, 391-394  
 Dalitsch, Dr. Walter W., 329  
 Danforth, Dr. I. N., 124-126, 190, 339, 340, 343, 421, 445, 468, 469, 484  
 Danforth, Dr. Willis, Biography of, 206  
 Danville, 71  
 Darrah, Dr. Alex T., 74, 185  
 Davenport, 498  
 Davis, Dr. David J., 3, 7, 91, 413  
 Davis, Dr. E. P., 182  
 Davis, Dr. Edward P., 406  
 Davis, Dr. Effa, 447  
 Davis, Dr. H. G., 162  
 Davis, Dr. H. W., 163-165  
 Davis, Dr. N. S., 39-45, 48-51, 53, 55-59, 65, 67, 70, 73, 74, 76, 78, 79, 83, 85, 103, 109-111, 113, 114, 116, 117, 119, 122, 123, 125, 129, 133, 134, 136, 139, 141-144, 147, 155, 189, 197, 201, 217, 315, 339, 343, 390, 391, 405, 407, 412, 417, 418, 427, 428, 431, 433, 465, 471, 480-482, 484, 485, 491, 492; Biography of, 503  
 Davis, Dr. Thomas A., 201, 204  
 Davis, Dr. W. H., 483  
 Davison, Dr. Charles, 204  
 Davison, Dr. W. M. W., 309  
 Day, Dr. L. A. L., 286  
 Death Registrations, 37, 38, 46, 47, 49, 50, 53  
 DeCamp, Dr. Samuel J. D., Medical Society, 490  
 Decatur, 46-49, 53-55, 83-85, 142, 192, 193, 240, 388, 483  
 Declaration of Independence, Dr. Rush, 88  
 DeCourcy, Dr. J. O., 89  
 Deering, William, 430, 431  
 Delafontaine, Dr. M., 444  
 DeLee, Dr. Joseph B., 86, 204, 216-218  
 Delegates, Organization of The Illinois State Medical Society, 36-90



- DeMarr Eye and Ear Hospital, 300  
 Department of Public Health, 83, 84  
 Dermatologists, Biographies of, 309-313  
 Dermatology, 306-313  
 deVille, Dr. Titus, 427  
 Dewey, Dr. Richard Smith, Biography of, 319, 320  
 DeWitt County, 44, 116, 117; Medical Society, 492  
 Diabetes, 1858, 116  
 Dick, Dr. George F., 241  
 Dick, Dr. Gladys H., 241  
 Dickenson, Dr. E., 39  
 Dickerman, Dr. E. T., 263, 331  
 Dickins, Dr. William, 197  
 Diet of Middle West, 32, 35  
 Diffenbacher, Dr. P. L., 500  
 Digitalis, 126, 146, 147  
 Diphtheria, 144, 241  
 Diseases, Contagious, 239-244; Epidemic, 241-244; of the Mississippi Valley, 507; Skin, 306  
 Dislocations, 168  
 Dissection, 366-402  
 District Medical Society of Central Illinois, 483  
 District and Regional Medical Societies, 492-501  
 Diuretics, 1866, 121  
 Dixon, 48, 57, 82, 116, 124, 130, 193, 257, 299  
 Dock, Miss Lavinia L., 479  
 Doctor's Riot, 1788, 372  
 Dodd, Dr. Oscar, 265, 288  
 Dodds, Dr. F. S., 500  
 Dodge, Dr.—, 163  
 Dodson, Dr. John Milton, 406, 422; Biography of, 250  
 Doepfner, Dr. Karl, 196  
 Dombrowski, Dr. Paul, Biography of, 277  
 Donaldson, H. H., 315  
 Dongola, Dr. McLane, 500  
 Dover's Powders, 139  
 Drake, Dr. Daniel, 3, 4, 17, 19, 32, 34, 103, 507  
 Draper, Dr. Andrew S., 437, 441  
 Dressing, Compression, 170  
 Drinking Water, 33  
 Druitt, Dr. Robert, 103  
 Drury, John, Old Illinois Houses, 508  
 Dryer, George P., 410, 411  
 Ducker, J. Orlando, 286  
 Dudley, Dr. E. C., 219  
 Duelling Act, 366  
 Duncan, Dr. David, 287  
 Duncan, Dr. J. R., 284  
 Duncan, Dr. Thomas Cation, 482, 483  
 Dunham Medical College, 287, 454  
 Dunning, Cook County Insane Asylum, 448  
 Dunning, Dr. C. W., 183  
 Dunning State Hospital, 109  
 DuQuoin, 500  
 Dyas, Dr. William G., 117, 442-444  
 Dyas, Miranda, Wife of Dr. William G., 442, 443  
 Dysentery 16, 17, 151  
 Ear and Eye Hospital, 217, 300  
 Ear and Eye Infirmary, 21, 55, 97, 253, 263, 265, 266, 283, 287, 293, 294, 299, 446, 447  
 Ear, Eye, Nose and Throat Hospital, 266  
 Earle, Dr. Charles Warrington, 80, 131, 134, 139, 142, 219, 228, 240, 350, 399, 431-434, 436, 437, 443-445, 448, 460; Biography of, 248  
 Earle, Dr. F. O., 164, 167  
 Earle Library, Woman's Medical College, 461  
 Early Medical Chicago, 507  
 East St. Louis, 87, 88, 144; Medical Society, 89  
 Eating Habits of Westerners, 32  
 Ebert, Albert E., 482  
 Eberth of Germany, 131  
 Eckley, W. T., 439  
 Eclectic Medical Institute of Cincinnati, 103  
 Eclectic Medicine and Surgery Annual, 487  
 Edbrooke, George H., 434  
 Eddy, Dr. W. J., 240  
 Edgar County, 44, 46, 51  
 Edinburg University of Chicago, 454  
 Education in Illinois, Medical, 413-454  
 Educational Institutions, Medical Libraries Connected with, 457-463  
 Edwards, Dr. Arthur R., 145, 146, 204, 301  
 Edwards County, 107  
 Edwardsville, Medical Society, 490  
 Edwardsville Spectator, 27, 489, 490  
 Egan, Dr. William B., 307  
 Eisendrath, Dr. D. N., 196  
 El Paso, 499  
 Elaterin, 147  
 Ellingwood, Dr. Finley, 487  
 Ellingwood, Dr. P., 483  
 Emetics, 109, 121, 132  
 Enabling Act, 365  
 Encephalitis, 18  
 Englemann, Dr. Rosa, 147  
 Ensign, Dr. William O., 78, 492, 499  
 Eora University, 117  
 Epidemic Diseases, 241-244

- Epidemics, 5, 507  
 Epileptic Colony, 84  
 Ergot, 147  
 Erysipelas, 151  
 Ether, 123, 169, 173, 175  
 Etheridge, Dr. James H., 127, 192, 218, 219, 332, 420-422, 459  
 Ethics, First Code of, 38  
 Evans, Dr. A. E., 309  
 Evans, Dr. John, 110, 417, 481, 482, 492; Biography of, 502, 503  
 Evans, Dr. William A., Medical Library 463  
 Eve, Dr. Duncan, 193, 333  
 Everett, Dr. J. M., 130, 257  
 Everett, Dr. Oliver, Medical Library, 457  
 Examining Board, Medical, 50  
 Extractum Sanguines, 112  
 Eye Infections, 18, 20, 21  
 Eye and Ear Hospital, 217, 300  
 Eye and Ear Infirmary, 21, 55, 97, 253, 263, 265, 266, 283, 287, 293, 294, 299, 446, 447  
 Eye, Ear, Nose and Throat Hospital, 266  
  
 Fairbank, N. K., 474  
 Faith's Record, 481  
 Falls, Dr. Frederick H., 211  
 Family Doctors of the Lincoln Family in Springfield, 508  
 Farnsworth, P. J., 498  
 Fauna and Flora, 11, 12  
 Faux, William, 29, 30, 32  
 Favill, Dr. Henry, 145  
 Fayette County, 44, 115, 367, 383  
 Fellows, Dr. C. Gurnee, Biography of, 274  
 Fenger, Dr. Christian, 70, 130, 183, 185, 190, 192, 193, 197, 200, 201, 227, 234, 235, 295, 339, 340, 342, 344, 346, 352-354, 412, 438, 448, 471; Biography of, 209  
 Ferguson, Dr. A. H., 194, 196, 201, 438  
 Fever, Malaria, 27-29, 243; Scarlet, 241, 242; Spotted, 119; Typhoid, 150, 151, 243; Yellow, 18, 20  
 Finke, L. L. 19  
 Firebaugh, Dr.—, 101  
 Firebaugh, Mrs., 85  
 First District Medical Society, 490  
 Fishbein, Dr. Morris, 480, 486  
 Fisher, Dr. A., 444  
 Fisher, Dr. William A., Biography of, 273  
 Fiske, Dr. George F., 286, 301; Biography of, 273  
 Fitch, Dr. Graham, Biography of, 206  
 Fitch, Dr. Thomas D., 62, 65, 127, 177, 217, 224, 240, 444, 445, 483  
 Fitz, 105  
  
 Flagg, Edmund T., 29  
 Flanders, Dr. Jonathan Leavitt, 107  
 Flexner, Dr. Simon, 244  
 Flies, House, 31  
 Flint, Dr. Austin, 118, 339  
 Flint, James, 27, 29  
 Flora and Fauna, 11, 12  
 Fluorosis, 18, 23, 24  
 Foote, Dr. D. E., 224  
 Forceps, Tarnier's, 177  
 Forceps In Obstetrics, 233  
 Fordham, 32, 33  
 Forman, Dr. John, 483  
 Foster, Dr. Addison H., 443, 444  
 Fowler, Dr. May, 447  
 Fox, Dr. William, 204  
 Fox River Valley Medical Association, 55, 71, 495, 496  
 Fracture Bed Demonstration, Dr. Truesdale, 60, 169  
 Fractures, Agnew, 182; Treatment of, 159-163, 167-169, 173-176, 180, 181; Un-united, 159-162, 167  
 France, Educational Statistics, 69  
 Francis, Dr.—, 104  
 Frank, J. P., 19  
 Frank, Dr. Jacob, 190, 195, 196, 201  
 Frank, Dr. Mortimer, Medical Library, 471  
 Franklin Medical College, 155, 403  
 Freer, Dr. Archibald, 406  
 Freer, Dr. Joseph W., 64, 65, 126, 160, 163, 175-177, 197, 198, 223, 224, 388, 405, 406, 416-418, 420, 471; Biography of, 205, 206  
 Freer, Dr. Otto T., 301  
 Friedell, Barbara Fishbein, 480  
 Fringer, Dr. William R., Biography of, 275  
 Frye, Dr. Joseph C., 158, 385, 456, 457  
 Fulton County, Medical Society, 89, 492  
 Furber, Henry Jewett, 463  
 Furry, Dr. J. D., 232  
 Futterer, Dr. Gustav, 301  
  
 Gahn, Dr.—, 177  
 Galena, 169  
 Galesburg, 89, 90, 95, 135, 142, 145, 497  
 Galesowsky, Dr.—, 259  
 Gallatin County, Medical Society, 89  
 Galva, 497  
 Gamble, Dr. W. E., 265, 288  
 Gardiner, Dr. E. J., 261; Biography of, 272  
 Gaston, Dr. J. M., 187  
 Gehrmann, Dr. Adolph, 353, 356, 358, 360, 439, 463  
 Geisse, Dr. Emma C., 478

- Gelsimine, 1883, 134  
 General Medical College, 451  
 General Practitioner, 99-107  
 Geneva, 495  
 Geochemical Diseases, 18, 22, 23  
 Geographic Features of Illinois, 8, 9  
 Geography of Illinois, Medical, 7-25  
 George, Dr. Oliver, 107  
 Germ Theory, 102, 137, 345-355  
 German Empire Educational Statistics, 69  
 Gibson, A. T., Medical Library, 471  
 Gill, Dr. Henry Z., 130, 178, 291-293, 295;  
     Biography of, 302, 303  
 Gilman, Dr. Helen, 446  
 Gilman, Illinois, 138  
 Gilmer, Dr. T. L., 333, 335, 337  
 Gilmore, Dr. A. P., Biography of, 271  
 Girard, 298  
 Glaciers, 9, 10  
 Gleason, Patrick A., 394  
 Godine, Dr. F. W., 135  
 Goiter, 18, 22, 149  
 Golliday, Dr. Uri P., 495  
 Goodbrake, Dr. C., 46, 116, 388  
 Goodhue, Dr. Josiah C., 156, 494  
 Goodkind, Dr. M. L., 315  
 Goodwin, Dr. A. E., Medical Library, 468  
 Goshen, 163  
 Goudy, Calvin, 467  
 Gould, J., 29  
 Gradle, Dr. Henry, 133-136, 264, 286, 299,  
     349, 350, 352, 353, 408; Biography of, 270  
 Graham, Dr. David W., 75, 78, 80, 81, 83,  
     87, 89, 144, 159, 177, 187, 189, 190, 192,  
     193, 445, 483  
 Grand Crossing, 138  
 Grand Prairie, 12  
 Grand View, 45, 46, 48, 494  
 Granniss, Dr. M. M., 60  
 Grave Robbing, 372-402  
 Gray, Dr. E. W., 63, 64, 126  
 Great Britain, Educational Statistics, 69  
 Green, Dr. W. D., 496  
 Greene, George W., 113  
 Greenwich, 55  
 Greer, Dr. Joseph H., 309  
 Gregg, Dr. Patrick, 498  
 Gregory, Dr. J. M., 128  
 Gregory, Dr. Milton, 63  
 Griffith, Dr. B. M., 68, 483  
 Gross, Dr. Samuel D., 103, 104, 180, 200, 251  
 Grove City, 331  
 Guilford, Dr. Paul, 264  
 Guiteras, Dr.—, 20  
 Gull, Dr.—, 125  
 Gunn, Dr. Moses, 77, 78, 156, 167, 168, 173,  
     176-178, 200, 291, 330, 347, 419, 421, 476;  
     Biography of, 205  
 Gunn, Dr. R. A., 483  
 Gunshot Wounds, Civil War, 201-203  
 Guthrie, Dr. W. E., 193  
 Gynecology and Obstetrics, 211-238  
 Hacker, Dr. H. C., 499, 500  
 Hagler, Dr. Elmer, Biography of, 276  
 Hahnemanian Advocate, The, 483  
 Hahnemann College, Medical Journalism,  
     487  
 Hahnemann Homeopathic College, 442  
 Hahnemann Medical College and Hospi-  
     tal, 283, 284, 450, 451  
 Hahnemann Pulse, The, 487  
 Haines, Dr. Walter S., 420  
 Halderman, J. A., 36  
 Hale, Dr. James I., 483, 499  
 Hale, Dr. Peter, 107  
 Hall, Dr.—, 193  
 Hall, Dr. A. M., 264  
 Hall, Dr. B. Marshall, 112  
 Hall, Dr. C. W., 145, 332  
 Hall, Dr. Thomas, 40, 41, 113, 456, 495  
 Hall, Dr. Winfield Scott, 408  
 Hallam, Dr. John L., Medical Library, 467  
 Haller, Dr. F. B., 48, 115, 159, 254, 483  
 Halstead, Dr. Albert E., 194-196, 201, 204  
 Halsted, Dr. J. W., 252, 482  
 Halsted, Dr. W. S., 106  
 Hamiafar, Dr. Florence N., 218  
 Hamill, Dr. R. C., 118  
 Hamilton, Dr. C. M., 107  
 Hamilton, Dr. John B., 5, 83, 85, 88, 173,  
     174, 176, 421, 485, 507; Biography of,  
     208  
 Hamilton, Dr. Joseph O., 60, 61  
 Hamilton County, Medical Society, 89  
 Hammer, Dr. H., 129  
 Hammond, Surgeon General W. A., 119  
 Hampton, Miss Isabel Adams, 477  
 Hancock County Medical History, 505;  
     Medical Society, 492  
 Hard, Dr. A., 47, 117, 495  
 Hard, Dr. Nichols, 155  
 Hardie, Dr. T. Melville, 286, 288, 301  
 Hardin County, Medical Society, 89  
 Harlan, Dr. A. W., 439  
 Harmon, Dr. Elijah Dewey, Medical Li-  
     brary, 456  
 Harper, Dr. John E., 265, 284, 285; Biog-  
     raphy of, 272  
 Harper, William Rainey, Medical Library,  
     459



- Harris, Dr. J. O., 115  
 Harris, Dr. Malcolm L., 197, 201  
 Harris, Mrs. Sarah C., 451  
 Harrison, Dr. Frank M., Medical Library,  
     471  
 Harsha, Dr. William M., 192, 463  
 Harvey, Dr. J. C., 331  
 Harvey Medical College, 285, 286, 309, 454  
 Haskell, Dr., 43, 494  
 Hatch, Dr. Ira, 121  
 Hatfield, Dr. Marcus Patton, 237; Biog-  
     raphy of, 249  
 Haughman, Dr. J. A., 195  
 Havana, 500  
 Haverford College, 408  
 Havighurst, Walter, 11  
 Hawkinson, Dr. Oscar, 314  
 Hawley, Dr. George Fuller, 266; Biography  
     of, 304  
 Hawley, Dr. S. B., 495  
 Hay, Dr. Walter, 73, 74, 77; Biography of,  
     319  
 Hayes, Dr. Hiram H., 106  
 Hayes, Dr. Plymman, 445  
 Head, G. P., 286  
 Health Monitor, The, 487  
 Hecker, A. F., 19  
 Heise, Dr. A. H., 160  
 Heise, Dr. Ellen H., 235  
 Hektoen, Dr. Ludvig, 142, 204, 339-341,  
     343, 357, 459, 460, 463, 465, 471, 472  
 Hemenway, Dr. H. B., 283  
 Hemple, Miss M. E., 476, 477  
 Henrotin, Dr. F., 216  
 Henry, Dr. A. G., 36, 111, 112  
 Henry County Medical Society, 505  
 Herbalists, 93  
 Hering Medical College, 286, 453, 454  
 Herrick, Dr. James B., 86, 144, 146, 195,  
     204, 342  
 Herrick, Dr. William B., 36, 39, 40, 109,  
     116, 157, 158, 385, 390, 405, 406, 417, 418,  
     422, 481, 492; Biography of, 206, 207  
 Herriott, Dr. E. L., 225, 226  
 Hewitt, Dr. Michael, 95  
 Heydock, Dr. M. O., 51  
 Heyworth, Dr. J. O., 126  
 Heyworth, Dr. Noble, 115, 118  
 Hickey, Dr. Rachel, 446  
 Hickman, Kentucky, 20  
 Higinbotham, Harlow N., 478  
 Hildreth, Dr. Joseph Sullivan, 254, 255,  
     264, 286, 300; Biography of, 268, 269  
 Hill, Dr. William, 73, 173, 180, 330  
 Hillsboro, 125, 290, 483, 494  
 Hinde, Dr. Alfred, 263  
 Hireling System, 45, 56  
 Hirsch, A., 19  
 Hirsch, Dr. Edwin F., 339  
 History of Medicine and Surgery in Chi-  
     cago, 506  
 Hoadley, Dr. Albert E., 190, 439  
 Hoag, Dr. Junius C., 189, 486  
 Holinger, Dr. Jacques, 286; Biography of,  
     303  
 Holland, Dr. P. L., 315  
 Hollister, Dr. John H., 50, 52, 60, 69, 74,  
     121, 126, 127, 130, 131, 134, 145, 159, 164,  
     189, 192, 408, 418, 427, 485, 486  
 Holmes, Dr. Bayard, 201, 347, 351-353, 356,  
     436, 462, 465, 471, 472, 486  
 Holmes, Dr. Edward L., 67, 97, 156, 159,  
     251-256, 263, 283, 286, 295, 299, 301, 419,  
     421; Biography of, 267, 268  
 Holroyd, Dr. E. E., 409  
 Holtin, Dr.—, 185  
 Holton, N., 497  
 Homan, Dr.—, 179  
 Homeopathic Family Guide, The, 481  
 Homeopathic Journal of Materia Medica,  
     Chemistry and Pharmacology, 483  
 Homeopathic Medical College, 450, 451,  
     453  
 Homeopathic Record, 484  
 Homeopathy, 102  
 Hook, Dr. E. I., 341  
 Hooker, Dr.—, 494  
 Hooper, Dr. Daniel, 118  
 Hooper, Dr. Henry, 216  
 Hopkins, Dr.—, 191  
 Hospital for Insane in Jacksonville, 62, 96  
 Hospital Libraries, Origin of, 472  
 Hospital Life, 488  
 Hospitals, Medical Journal, 480  
 Hotchkiss, Dr. George W., 496  
 Hotz, Dr. F. C., 130, 198, 255, 256, 258, 260,  
     263-265, 291, 295, 299; Biography of,  
     270  
 House of Delegates, Organization of The  
     Illinois State Medical Society, 36-90  
 Howard, Dr. H. Williams, 263, 341  
 Howell, Dr. V. D., 160  
 Hoyne, Dr. Archibald L., 239, 245  
 Hrdlicka, Alex, 16  
 Hudson, A. A., 405  
 Hudson, Dr. A. S., 48, 117, 418  
 Hughes, Dr. C. F., 490  
 Hulme in 1819, 34  
 Hunt, Dr. Charles C., 82, 124, 193, 299  
 Hunter, William, 371  
 Hurlbut, Dr. J. A., 483

- Hyde, Dr. James Nevins, 65, 70, 127, 136, 306, 308, 309, 354, 421, 466, 507; Biography of, 310-312
- Hydrargyrum Tannicum Oxydulatum, 138
- Hydrochlorate of Cocaine, 136
- Hydrochloric Acid, 140
- Hydrogen Peroxide, 123
- Hyoscyamus, 121
- Hypophosphites, 147
- Hysterectomy, 227, 228
- Iles, T. J., 498
- Illinois, Animals of, 12; Forests of, 12; Geographic Features of, 8, 9; Groves of, 12; Ice Age of, 9, 10; Medical Geography, 7-25; Plains of, 12; Prairies of, 12; Rivers of, 10, 11; Waterways, 10, 11
- Illinois Asylum for the Education of the Deaf and Dumb, 300
- Illinois College, 155, 214, 405, 457, 458
- Illinois Eye and Ear Infirmary, 21, 97, 263, 265, 266, 283, 287, 293, 294, 299, 446, 447
- Illinois General Hospital, 39, 40, 111, 217, 417
- Illinois Homeopathic Medical Association, 483, 484
- Illinois Industrial University, 354
- Illinois Medical College, 287, 309, 452
- Illinois Medical Journal, 90, 147, 487, 506
- Illinois Medical Recorder, 483
- Illinois Medical and Surgical Journal, 404, 481
- Illinois Microscopical Society, 391
- Illinois Postgraduate Medical School, 265
- Illinois School for the Blind, 266, 267
- Illinois School of Dentistry, 438
- Illinois State Board of Charities, 84
- Illinois State Dental Society, 351
- Illinois State Eclectic Medical Society Journal, 483
- Illinois State Medical Register, 483
- Illinois State Medical Society, Early History, 491; European Excursion, 90; Organization of, 36-90; in Regard to Libraries, 466, 467
- Illinois Territorial Government, 104
- Illinois Training School for Nurses, 473-479
- Illinois and Indiana Medical Journal, 481
- Illinois in the Fifties, 508
- Illinski, Dr. A. X., 146
- Independence, 45
- Index Medicus, 81
- Indian Diseases, 13-17; Explorers, 12, 13; Medical Specialism, 92-94; Practices and Beliefs, Obstetrics and Gynecology, 211-213; Practices in Medicine, 92, 93; Surgery, 15
- Indiana Medical College, 155
- Indiana Medical Reporter, 484
- Indiana State Medical Society, 48, 494
- Indianapolis Gazette, 27
- Indigenous Fauna and Flora, 11, 12
- Indigenous Indian Diseases, 13-17
- Infant Mortality, 104
- Infectious Diseases, Regional, 18-21
- Influenza, 27
- Ingals, Dr. Ephraim Fletcher, 69, 83, 120, 134, 138, 142, 177, 215, 283, 286, 292, 295-299, 301, 400, 418, 420-422, 430, 431, 448, 465-467, 494; Biography of, 303
- Ingersoll, Dr. Ellen, 66
- Insanity Board of Commissioners, 73
- Intemperance, 32, 35
- Internal Medicine, 108-152
- International College of Surgeons, Journalism, 480
- International Journal of Medicine and Surgery, 487
- International Medical Congress, 77, 90, 145
- Interstate Medical Journal, 487
- Interstate Post Graduate Medical Association of North America, 487
- Intoxications, 18, 21, 22
- Iodine, 114
- Iodide of Lime, 119; of Potassium, 112, 113, 115
- Iowa and Illinois Central District Medical Association, 498, 499
- Ipecac, 134
- Iron, 113, 115; Essays, 39
- Irvine, Dr. E. D., 486
- Isham, Dr. Ralph N., 181, 190, 200, 426-428, 471, 476
- Italy, Educational Statistics, 69
- Jackson, Dr. A. Reeves, 98, 132, 219, 224, 226, 399, 431, 433, 434, 436, 437, 461, 462, 483
- Jackson, 120, 334; Medical Society, 490
- Jacksonville, 39, 42, 46, 50, 57, 62, 63, 76, 78-80, 117, 118, 142, 149, 160, 163, 164, 189, 200, 225, 288, 331; Hospital for Insane, 96; Illinois Asylum for the Education of the Deaf and Dumb, 300; Illinois College, 155, 214, 457, 458; Illinois School for the Blind, 266; Morgan County Medical Society, 491
- Jacob, Dr. John J., 107
- Jacobi, Dr. A., 136

- Jacobson, Dr. Daniel Sigismund, Biography of, 269
- Jacobson, Dr. S. D., 476
- Jaffe, Dr. R. H., 340
- Jaggard, Dr. W. W., 216, 230
- Janesville, 124, 163
- Janeway, Dr. T., 137
- Jaques, Dr. W. K., 359
- Jasper County, Trachoma in, 21, 266
- Jefferson Medical College, 410
- Jelks, J. T., 439
- Jenks, Dr. D. S., 495
- Jenks, Dr. Edward, 227
- Jenner Medical College, 454
- Jenner School, 285
- Jersey County, Trachoma in, 21; Medical Society, 64, 492
- Jerseyville, 60, 126, 130, 291, 293; Medical Society, 492
- Jewell, Dr. James Stewart, 96, 97, 120, 446, 469, 484, 486; Biography of, 321
- Jewell Library, 464, 465, 472
- Jewett, Dr. D. L., 124
- Johnson, Dr. Charles B., 160, 332, 471, 494, 508
- Johnson, Dr. Frank S., 143
- Johnson, Dr. Hosmer A., 41, 112, 116, 122, 126, 164, 198, 339, 388-391, 396, 398, 406-408, 417, 418, 425-429, 433, 465, 471, 474
- Johnson, Dr. J. Perine, 59, 255
- Johnson, Dr. Thomas, 112
- Joins, Horace F., 298
- Joliet, 43, 160
- Jones, Dr. George W., 71, 461, 505
- Jones, Dr. H. W., 217, 219
- Jones, Dr. H. Webster, 60
- Jones, Dr. N. W., 204
- Jones, Dr. Samuel J., 75, 255-258, 264, 286, 289, 290, 292, 294, 295, 301, 425; Biography of, 269, 270
- Jones, Dr. Sidney, 195
- Jonesboro, 499, 500; Medical Society, 500
- Jordan, Dr. Edwin O., 360
- Journal of American Medical Association, 480, 484-486; American Medical Hydrology, 486; Chronic Diseases, 488; Cutaneous Diseases Including Syphilis, 484; Cutaneous and Genitourinary Diseases, 484; Cutaneous and Venereal Diseases, 484; Heredity, 486; Nervous and Mental Diseases, 96; Official Surgery, 487; Post Graduate Medical School of Chicago, 486; Scientific Medicine, 488
- Journalism in Illinois, Medical, 480-488
- Kales, Dr. John Davis, 357
- Kampmeier, Dr. Otto F., 361, 449, 455
- Kane County, 173
- Kanne, Dr. A. J., 277
- Kaskaskia, 361-365, 367, 383; Medical Society, 490
- Kearsley, Dr. Jeanette, 446
- Kelly, Dr. James, 107
- Kemp, George T., 411
- Kennecott, Cass L., 358
- Kent, Augusta, 443
- Kenyon, Dr. E. L., 459
- Keokuk College of Physicians and Surgeons, 409
- Kewanee, 145, 193, 497
- Kewley, Dr. J. R., 264
- Kiernan, Dr. J. G., 315
- Kimber, Miss Diana, 477
- King, Dr. Oscar A., 315, 437; Biography of, 326
- King, W. H. H., 465
- Kinyoun, Dr. J. J., 144
- Kirk, Dr. William Thomas, 77
- Kirkwood, Dr. Tom, 99, 505
- Kittoe, Dr.—, 169
- Klebs, Dr. Arnold, 301
- Knapp, Dr. Moses L., 156, 245, 404
- Knox, Dr. James Syndam, 218, 421, 422; Biography of, 248
- Knox County, 21, 89; Medical Society, 492
- Knoxville, 71, 126, 176
- Koch's Lymph, 141
- Kock, Dr. P., 295
- Kreider, Dr. G. N., 88
- Krogman, 12
- Kuh, Dr. Sydney, 315; Biography of, 325, 326
- Kuykendall, Dr. J. A., 106
- Lacon, 85, 495; Medical Society, 495
- Lactophosphate of Calcium, 147
- LaFayette, 252
- Lagorio, Dr. Antonio, 355
- Lake, Dr. George B., 487
- Lake Forest University, 423, 487
- Lambert, Dr. L. S., Biography of, 277
- Lane, Dr.—, 494
- Laona, 113
- LaPorte University, 155
- Laryngology, 280-305
- LaSalle, 40, 41, 43; Medical Society, 491
- Latham, Dr. Veta Annette, 448
- Latimer, Dr. H. H., 309
- Latrobe, 32, 34
- Latta, Dr.—, 163
- Laurentia, 9



- Lauver, Miss Isabella, 475  
 Laveran of France, 131  
 Lawbaugh, Dr. E. A., 263  
 Lawrence County, 21, 103, 106, 107; Medical Society, 505  
 Lawrenceville, 505; Aesculapian Medical Society, 106, 493  
 Laws, Anatomy, History of, 361-402  
 Lawton, Dr. A. G., 43  
 Lazear, Dr. —, 1898, 147  
 LeCount, Dr. Edwin R., 204, 340, 342  
 Lederer, Dr. Francis L., 280-305  
 Lee, Dr. E. W., 70, 183, 184, 190, 200, 295, 331  
 Lee, Dr. Edward H., 201  
 Leeds, Dr. L. L., 500  
 Legal Regulations of the Practice of Medicine, 71, 72  
 Lemon Juice Remedy, 109  
 Lemont, 174, 176  
 Lence, Dr. W. C., 499, 500  
 Lens, The, 483  
 Lescher, Dr. J. J., 112  
 Leshner, Dr. Samuel, 107  
 Lester, Dr. G. B., 495  
 Lewis, Dr. Denslow, 89, 216  
 Lewitt, Dr. William, 419  
 Lewy, Dr. Alfred, 280-305  
 Libraries, Action of Illinois State Medical Society in regard to, 466, 467; County Medical Societies, 464-466; John Crerar, see 514; Hospital, Origin of, 472; Medical, Connected with Educational Institutions, 457-463; Medical, Preceding 1900, 455-472; Medical, Prior to 1850, Private, 456, 457; Medical, Privately Endowed, 463, 464; Newberry, see 523  
 Lillie, Dr. Frank R., University of Chicago, 462  
 Lime, Iodide of, 119  
 Lime and Soda, Sulphates of, 119  
 Lincoln, Illinois, 142, 143, 500  
 Lincoln, Family Doctors, 508; Nancy Hanks, 27; Tribute to, 51, 52  
 Lind, Sylvester, 426  
 Lind University, 50, 155, 217, 264, 390, 405, 407, 408, 418, 426, 428  
 Lister, Lord, 96  
 Listerism, 181  
 Lockwood, Dr. Charles, 218  
 Locy, Dr. William A., 406, 422  
 Lodor, Dr. G. H., 315  
 Loeb, Dr. Jacques, 315, 406, 412  
 Loring, Dr. J. B., 265, 288  
 Louisville Medical Institute, 405  
 Low, Dr. Julia Ross, 309  
 Loyola University School of Medicine, 452, 508  
 Luce, Dr. A. H., 51, 163  
 Ludeking, Dr. Robert, 144  
 Ludlam, Dr. R., 128  
 Lydston, Dr. G. Frank, 141  
 Lyman, Dr. Henry M., 315, 339-341, 406, 420-422, 445, 460  
 Lyman, Dr. W. C., 419  
 Lynn, Dr. I. P., 419  
 MacArthur, Dr. R. A., 263, 264  
 MacArthur, Dr. Robert D., 308; Biography of, 310  
 MacAuliffe, Miss, Librarian, 460  
 Macomb, 498; Medical Society, 492  
 Madison, 419  
 Magee, Dr. D. W., 232  
 Magnolia, 495  
 Mahla, F., 427  
 Maibee, Rev. of Rock Island, 60  
 Makanda, 499  
 Malaria, 5, 18-20, 27-29, 112, 150, 243  
 Malok, Johann, 454  
 Mammen, Dr. E., 194  
 Manierre, Dr. C. E., 216  
 Mann, Dr. William A., 251, 264  
 Marguerat, Dr., Eugene, 444  
 Marine, D., 23  
 Marine Hospital, U.S. 39, 40, 51, 197  
 Marmorek's Serum, 195  
 Marriage Registrations, 37, 38, 46, 47, 49, 50, 53  
 Marsh, Dr. W. R., 122  
 Marshall, Dr. John, 185  
 Marshall, 114; Medical Society, 499  
 Martin, Dr. Franklin H., 189, 480  
 Martin, Dr. H. M., 265  
 Martin, Dr. Henry H., 178  
 Martin Bandage, 178  
 Martineau, Harriet, 30, 31  
 Mary Thompson Hospital, 309  
 Mason City, 126; Medical Society, 500  
 Matico, 112  
 Mathews, Dr. J. P., 80, 293, 296  
 Matthews, Dr. S. A., 146  
 Matthews, Dr. W., 116  
 Maugear, Dr. J. J., 315  
 Maxwell, Dr. J. B., 107  
 Maxwell, Dr. Philip, 492  
 Maxwell, Dr. Thomas J., 182  
 McArthur, Dr. A. L., 43, 157, 171, 172, 388  
 McArthur, Dr. Erial, 38, 112, 492  
 McArthur, Dr. L. L., 189, 192, 193, 196, 201, 204, 331, 332, 354

- McCandless, Dr.—, 195  
 McCarty, Dr. J. C., 106, 107  
 McClellan, J. H., 411  
 McClelland, Dr. M. A., 71, 126, 176  
 McCowen Oral Home School for Deaf Children, 300  
 McDermott, Dr. P. J., 505  
 McDonald, Dr. Peter S., 444  
 McDonough County Medical Society, 89  
 McDowell, Dr. Ephriam, 226  
 McElroy, Dr. Z. C., 124  
 McElvaine, Dr. T. M., 187  
 McEwen, Dr. Ernest L., 308  
 McFarland, Dr. Andrew, 61, 118; Biography of, 320, 321  
 McGowan, Julia M., 445  
 McGraw, Dr.—, 173  
 McHenry County Medical Society, 492  
 McIlvaine, Dr. T. M., 484  
 McIsaac, Miss Isabell, 479  
 McLane, Dr. W. L., 500  
 McLeace, Dr. John, 500  
 McLean, Dr. John, 156  
 McLean County, 44, 85; Medical Society, 492  
 McMahon, Agnes, 445  
 McVey, Dr. R. E., 119, 254  
 McVickar, Dr. Brockholst, 300, 491, 492  
 McWilliams, Dr. Samuel A., 431-435, 444  
 Meacher, Dr. Bryon B., 204  
 Mead, A. D., University of Chicago, 462, 463  
 Mead, Dr. Edward, Biography of, 316-318  
 Mead, Dr. William, 106  
 Mease, Dr. Levi A., Medical Library, 468  
 Medical Advance, The, 487  
 Medical Bacteriology, 343-360  
 Medical Book Collections after 1850, Private, 467-471  
 Medical Call, The, 484  
 Medical Century, The, 487  
 Medical Counselor, The, 484  
 Medical Discoveries in Illinois, Early, 504  
 Medical Education, Cultism and Publications, 486; in Illinois, 413-454; Obstetrics and Gynecology, 214-219; Statistics of Different Countries, 69  
 Medical Era, The, 484, 486  
 Medical Examining Board, 50  
 Medical Geography of Illinois, 7-25  
 Medical Investigator, The, 481, 482  
 Medical Journalism in Illinois, 480-488  
 Medical Libraries, Connected with Educational Institutions, 457-463; Preceding 1900, 455-472; Prior to 1850, Private, 456, 457; Privately Endowed, 463, 464  
 Medical Library Association of Chicago, 465  
 Medical Missionary College, American, 454  
 Medical Missionary and Gospel of Health, The, 487  
 Medical Plants, 113  
 Medical Practice Act, 148, 489, 490, 494  
 Medical Practices of Indians, 14, 15  
 Medical Press Association, Library, 466  
 Medical Regionalism in Illinois, 17  
 Medical Register, The, 177  
 Medical Register and Advertiser, The, 483  
 Medical Review, The, 484  
 Medical Review of Reviews, The, 486  
 Medical Review of St. Louis, The, 484  
 Medical Schools, Survival of, 449-454  
 Medical Societies, County, 491, 492, 505; District and Regional, 492-501; Early, 489-501  
 Medical Society Act, 364  
 Medical Society of Upper Illinois, 495  
 Medical Specialism, Indian, 92-94; Rise of, 91-98  
 Medical Standard, The, 486  
 Medical Visitor, The, 484, 486  
 Medicine, Internal, 108-152  
 Medicine Men, 93  
 Medico-Chirurgical College, 410  
 Medico-Chirurgical Society, 491, 493, 495  
 Medicolegal Activities, 49  
 Medico-Legal Society, Journalism, 487  
 Meek, Dr. E. G., 36, 492  
 Mellish, Dr. Ernest J., 201  
 Mendota, 66, 68, 73, 76, 85, 122, 129, 240, 256  
 Menge, Dr. Frederick, 301  
 Meningitis, 119, 151, 243  
 Mercury, 111, 120  
 Mercy Hospital, 45, 51, 197, 216, 217, 264, 408, 417, 418, 428-430  
 Mergler, Dr. Marie J., 444-448  
 Merrifield, Dr. Frederick W., 329  
 Merriman, Dr. Henry P., 219  
 Metamora, 117, 124, 128, 162, 199, 254, 499  
 Metcalf, Dr. Walter B., 505  
 Metropolitan Medical College, 454  
 Mettler, Dr. L. H., 410  
 Meyer, Dr. Adolph, Biography of, 323  
 Miasma, 29  
 Michael Reese Hospital, 246, 308  
 Midwives, 93  
 Military Surgery, 201-203  
 Military Tract Medical Association, 55, 71, 496-498  
 Milk, Solidified, 113

- Milk Sickness, 18, 21, 22, 27, 110, 114-116, 151
- Miller, Dr. DeLaskie, 117, 204, 218, 219, 222, 418, 419, 421, 422, 473
- Miller, Dr. J. L., 146
- Miller, Dr. J. S., 189, 234, 331
- Miller, Dr. Katherine, 142, 143, 500
- Miller, Dr. Truman W., 200
- Miller, Dr. W. D., 350
- Milwaukee, Sanitation, 34
- Misericordia Hospital, 60
- Mississippi Valley, 3, 4, 17, 19, 20; Medical Journal, 487
- Missouri Medical Society, 76
- Mitchell, Dr. John, 494
- Mitchell, Dr. Louis J., 486, 487
- Mitchell, Dr. R. J., 298
- Mixer, Dr. Mary A., 478
- Modern Medicine, 487
- Modern Specialism, 94-96
- Molone, Dr. L. A., 233, 234
- Monmouth, 506
- Montgomery, Dr. Edmund B., 77, 466, 469
- Montgomery, Dr. Frank Hugh, 308; Biography of, 312
- Montgomery, Dr. William T., 256-258, 263, 283, 294; Biography of, 272
- Montgomery County, 44
- Monthly Journal of Southern Illinois Medical Association, 483
- Moodie, Dr. Roy L., 15, 507
- Morgan, Dr. ———, 78
- Morgan, Dr. John, 413
- Morgan, Dr. William E., 201
- Morgan County, Illinois School for the Blind, 266; Medical Society, 81, 491; Medical Society Library, 464, 465, 467; Spotted Fever, 119
- Morgenthau, Dr. George A., 286, 301
- Morning Bitters, 32
- Morris, Dr. Palmer, 190
- Morris Porter Memorial Hospital, 245
- Morse, Dr. J. M., 497
- Mortality Rates, 198
- Mosely, Representative of Edgar County, 46
- Mosquitoes, 19, 20, 29, 30
- Mound Builders, 13
- Mound City Military Hospital, 163
- Mt. Carmel, 107, 112, 147, 493
- Mt. Morris, 296
- Moyer, Dr. Harold N., 323, 324, 406, 422
- Muriatic Acid, 126
- Murphy, Dr. John B., 86, 157, 194, 195, 201, 204, 354, 412, 438, 504; Biography of, 207, 208
- Nance, Dr. H., 497
- National Board of Health, 129
- National Homeopathic Medical College, 288, 453
- National Medical Association, 51
- National Medical College and Hospital of Chicago, 287, 309, 453
- National Medical University, 287, 453
- National Pharmaceutical Association, 40
- Nelson, Dr. Daniel T., 219, 408, 421
- Neoga, 195, 494
- Necrology Committee, 55
- Nesbitt, Dr. G. W., 215
- Neurological Review, The, 486
- Neurological Society of Chicago, 89
- Neuropsychiatrists, Biographies of, 316-328
- Neuropsychiatry, 314-328
- New Orleans, 345, 354; Medical and Surgical Journal, 346; News and Hospital Gazette, 117; Touro Infirmary, 299
- New York Medical Record, 485; State Medical Society, 55
- Newberry, Mr. Walter Loomis, 463
- Newberry Library, 80, 83, 190, 460, 461, 463-467, 469, 470, 472
- Newcomer, Dr. J. W., 500
- Newman's Instrument, 177
- Nichols, Dr. T. L., 97
- Nicholsonville, 116
- Niglas, Dr. John N., 176
- Niles, Dr. Addison, 53
- Noble, Dr. H., 45, 52, 115, 118, 159
- Noble, Dr. William L., 265, 266
- Norbury, Dr. Frank P., 83, 89
- North American Practitioner, The, 353, 486
- North Central Illinois Medical Association, 71, 499
- Northwestern Journal of Homeopathia, 481
- Northwestern Medical and Surgical Journal, 108, 110, 112, 117-124, 127, 132, 139, 390, 481, 482, 492, 495, 496
- Northwestern University, 337, 390, 408, 410, 432, 448, 449; Medical School, 216, 217, 264, 356, 357, 405, 407-409, 425-431, 460, 461, 486; Woman's Medical School, 218, 357, 448
- Norton, Margaret C., 392
- Norton, Dr. Wellington B., 107
- Nostrums, 37, 43, 82
- Nurses, Illinois Training School for, 473-479
- Nussbaum, Prof., 199
- Nutrition in Pediatrics, 247, 248
- Oaks, J. F., 299



- O'Brien, Dr. J. E., 124  
 Obstetrics and Gynecology, 211-238  
 Ochsner, Dr. Albert J., 156, 201, 354, 406  
 Ogle County Medical Quarterly, 486; Medical Society, 400  
 Oil of Turpentine, 112  
 Oils, Animal, 109  
 Old Illinois Houses, 508  
 Olds, Dr. Henry G., 301  
 Olin, Dr. Henry, 284  
 Oliver, William, 31  
 Omaha Clinic, 486  
 Onargo, 190  
 Ophthalmias, 20, 21  
 Ophthalmologists, Biographies of, 267-278  
 Ophthalmology, 251-279  
 Opium, 111, 112, 115, 117, 121, 123, 139  
 Organization of The Illinois State Medical Society, 36-90  
 Orificial Surgery Journal, 487  
 Osteopathic Bill, 87-89  
 Oswego, 495  
 Otolaryngologists, Biographies of, 301-305  
 Otolaryngology, 280-305  
 Otology, 280-305  
 Ottawa, 31, 86, 87, 90, 115; Medical Society, 491, 492, 495; Medico-Chirurgical Society, 491, 493, 495  
 Outen, Dr. W. B., 487  
 Owens, Dr. John E., 178, 179, 185, 190, 192, 195, 200, 201, 421, 445  
 Owsley, F. D., 286  
 Oxford Publishing Company, 414  
 Ozonic Ether, 1869, 123  
  
 Packard, Dr. John H., 485  
 Paddock, Dr. S. Allen, 36, 494, 495  
 Page, Dr. David, 170  
 Palate, Cleft, Early Management of, 334-338  
 Paleopathology, 507  
 Palestine, Illinois, 107  
 Palmer, Dr. A. B., 112  
 Palmer, Dr. A. E., 190  
 Palmer, Dr. A. W., 360  
 Palmer, Dr. Henry, 438  
 Pan-American Medical Congress, 82  
 Paoli, Dr. G. C., 444  
 Paraldehyde, 138  
 Parasite, Malarial, 19  
 Parasitic Diseases, 8  
 Paris, Illinois, 49-51, 117, 164, 494  
 Park, Dr. Roswell, 131, 183, 185-187, 331, 345  
 Parker, Dr. Henry, 41, 113  
  
 Parkes, Dr. Charles T., 181, 200, 201, 345, 419-421  
 Parks, Dr. C. R., 163  
 Parry, Dr. H. E., Biography of, 277  
 Passavant Hospital, 352  
 Patellectomy, 160  
 Patent Medicine, 43, 109  
 Pathological Transactions of the Chicago Medical Society, 484  
 Pathology, 339-342  
 Patrick, Dr. Hugh T., 315; Biography of, 327  
 Paul, Dr. P. D., 287  
 Pawnee, 121  
 Payne, Dr. F. R., 114  
 Peck, Dr. F. P., Medical Library, 461  
 Peck, Dr. W. F., 498  
 Pediatricians, Biographies of, 248-250  
 Pediatrics, 245-250  
 Peirce, Dr. W. P., 174, 176  
 Peirson, Dr. A. L., 379  
 Penick, Dr. Ninus S., Biography of, 276  
 Penrose, Dr., 191  
 People's Health Journal, The, 486  
 Peoria, 36-39, 42, 59, 60, 72-74, 84, 113, 143, 146, 157, 158, 163, 175, 176, 187, 189, 193, 197, 229, 234, 252, 255, 299, 385; Medical Journalism, 484; Medical Monthly, 484; Medical Society, 492, 505  
 Pepo, 119  
 Pepsin, 139, 140  
 Percy, Dr. J. F., 83, 142  
 Permanganate of Potassium, 119  
 Perrine, Dr. Henry, 490  
 Perry County, Trachoma in, 21  
 Petersburg, 186  
 Pettit, Dr. J. W., 87, 88, 90  
 Pharmaceutical Association, National, 40  
 Pharmacist, Publication of Chicago College of Pharmacy, 482  
 Philadelphia, First Medical School, 413  
 Philips, Dr. E. W., 116  
 Phillips, Dr. Frank A., 288  
 Phillips, Dr. J. B., 48  
 Phillips, John, 261, 262  
 Phillips, Dr. W. S., 79  
 Physicians Club of Chicago, 89  
 Physiography and Disease, 7-25  
 Physiology, 403-412  
 Physio-Medicals, 102  
 Physiotherapy, Primitive, 93  
 Pickard, M. E., 5  
 Pierce, Dr. Norval Harvey, 286, 301; Biography of, 303, 304  
 Pierson, Dr. Azel, Medical Library, 465

- Pike County Medical Society, 505, 506  
 Pilocarpine, 134  
 Pinckard, Dr. Charles P., 264; Biography of, 274  
 Pioneer, How He Lived in the Early Middle West, 26-35  
 Piper, Dr. Alice, 447  
 Pittsfield, 240  
 Planat, Dr., 179  
 Plano, 495  
 Plasters, 139  
 Plastic Surgery, 163-166, 170, 329-338  
 Plexus, The, 305, 487  
 Plummer, Dr. Samuel C., 171, 173, 190, 201  
 Pneumonia Jackets, 139  
 Podophyllin, 134  
 Poison Ivy, 18  
 Poisonous Snakes, 18  
 Polyclinic, 216, 265, 285, 308, 468  
 Poliomyelitis, 18, 242  
 Pollens, 18  
 Pope County, 21, 89  
 Porter, Mrs. Julia F., 245  
 Porter, Dr. William, 292  
 Portraits of Physicians in Illinois, Collections of, 504  
 Postgraduate Medical School, 216, 265, 286, 309, 486  
 Postgraduate Training in Ophthalmology, 265, 266  
 Potash, Acetate of, 1865, 120  
 Potassa, 119  
 Potassium Acetate, 124; Bromide, 124; Chlorate of, 147; Chloride, 124; Iodide, 112, 113; Permanganate of, 119  
 Poultrices, 139  
 Powell, Dr. —, 79  
 Powell, Dr. Edwin, 156, 160, 162, 164, 167, 171, 197, 346, 418-420  
 Powell, Dr. I. A., 107  
 Practical Therapeutics, 486  
 Practitioner, His Preparation, Environment and Experiences, 99-107  
 Pratt, Dr. E. H., 487  
 Pratt, Harry E., 392  
 Preamble of First Constitution, State Medical Society, 37  
 Preble, Dr. Robert B., 144, 204  
 Prenatal Care, Rules for, 228  
 Prentice, Dr. Frederick M., 411  
 Presbyterian Hospital of Chicago, 163, 192, 218, 263, 283, 308, 424, 458, 477  
 Primitive Man, 12, 13  
 Primitive Specialism, 92-94  
 Prince, Dr. Arthur E., 163, 167-170, 173, 174, 257, 259, 261, 267; Biography of, 275, 276  
 Prince, Dr. David, 42, 46, 49, 57, 58, 62, 69, 76, 117, 134, 160, 162, 164, 165, 178, 197, 200, 201, 288, 289, 330, 331, 464, 465; Biography of, 207  
 Prince, Dr. James A., 193  
 Prince Sanitarium, 465  
 Princeton, 36, 495, 497  
 Private Medical Book Collections after 1850, 467-471  
 Privately Endowed Medical Libraries, 463, 464  
 Prohaska, Mrs. John Van, 480  
 Provident Hospital, 479  
 Psychiatry, 314-328  
 Public Health, Bacteriology in the Service of, 357-360  
 Publications and Institutions, Special, 96-98  
 Pulaski County, Medical Society, 89  
 Pulse, The, 487  
 Purdy, Dr. C. W., 134, 135, 138  
 Purging, 109, 141  
 Putnam County, 116  
 Pynchon, Dr. Edwin, 286; Biography of, 304  
 Pyroligneous Acid, 111  
 Quakers, 413  
 Quarantine Placards, 114  
 Quincy, 53-55, 72, 73, 77, 137, 147, 188, 200; College, 453, 466, 469, 470; Medical Journalism, 484; Medical Society, 53, 54, 492; Medical and Library Association, 89, 466, 469, 470; Public Library, 466, 470; Sanitation in, 33  
 Quine, Dr. William E., 141, 143, 193, 204, 217, 435-437, 445, 461, 462, 471  
 Quine Library, 461, 462  
 Quinine, 112, 115, 120, 123, 132  
 Quirk, Dr. John J., 309  
 Radiological Review, The, 487  
 Railway Surgeon, The, 487  
 Railway Surgical Journal, The, 487  
 Randolph, Dr. Laura A., 478  
 Rankin, Dr. A. C., 177  
 Rattlesnake Bite, 113  
 Rauch, Dr. John H., 76, 128, 148, 417  
 Rawlings, Dr. I. D., 4, 20, 507  
 Rea, Dr. Robert L., 418-420, 438  
 Read, Dr. N. S., 465

- Reed, Dr. Carlos I., 403  
 Reed, Dr. Walter, 146  
 Reese, Dr. M., 187  
 References, 506-508  
 Regional Diseases, 4, 18-25  
 Regional and District Medical Societies, 492-501  
 Registration of Births, Deaths, and Marriages, 37, 38, 46, 47, 49, 50, 53  
 Regulars, 102, 103  
 Reliance Medical College, 452  
 Remsbury, Dr.——, 399  
 Reyling, Father August, 470  
 Reynolds, Dr. Albert, 495  
 Reynolds, Dr. Arthur R., 359, 360  
 Reynolds, Dr. William L., 490  
 Rhodes, Dr. John Edwin, 283, 301, 416, 448; Biography of, 304  
 Rich, Dr. Kendall E., 499  
 Richards, Dr. George W., 371, 403, 404  
 Richey, Dr. Samuel O., 264, 292, 293, 301, 492  
 Richings, Dr. Charles H., 494  
 Ricketts, Dr. Henry T., 204  
 Rise and Fall of Disease in Illinois, 507  
 Rise of Medical Specialism, 91-98  
 Ritter, Dr. H. M., 286  
 Robbins, Dr.——, 54  
 Robbins, Dr. M. M., 495  
 Robinson, Dr. F. C., 139  
 Robinson, Dr. William F., 308  
 Robison, Dr. John A., 283, 301  
 Rock Island, 44, 60, 61, 78, 137, 155, 159, 169, 171, 173, 179, 187, 190, 498; Medical College, 404, 492; Medical Society, 239, 492, 506  
 Rock River Medical Society, 494, 495  
 Rockford, 45, 46, 115, 171, 220, 388; Medical Society, 492, 494  
 Roe, Dr. E. R., 42, 114  
 Rogers, Dr. C. C., 264  
 Rogers, Dr. E. C., 419  
 Rogers, L. D., 486  
 Rogers, S. Ida Wright, 486  
 Roler, Dr. Edward Oscar Fitzland, Biography of, 248  
 Rolfe, Charles Wesley, 411  
 Roman, Dr. H. H., 255  
 Rood, Dr. J. B., 223  
 Rooney, Dr. Michael, Medical Library, 469, 470  
 Root, Dr. Eliza H., 448  
 Roskotten, Dr.——, 175  
 Ross, Dr. J. P., 156, 163, 204, 300, 419, 421, 424  
 Rouse, Dr. Rudolphus, 36, 39, 42, 113  
 Ruppe, Dr. B., 230  
 Rush, Dr. Benjamin, 16, 17, 88, 109  
 Rush Medical College, 44, 51, 55, 64, 109, 117, 119, 155-157, 159, 168, 175, 204, 214, 222, 240, 245, 263, 282, 283, 292, 297, 298, 300, 308, 339, 341, 347, 349, 354, 356, 357, 388, 390, 404-407, 416-424, 427, 433, 450, 458-460, 486, 487  
 Rush Monument Fund, 90  
 Russell, Dr. Jeremiah, 494  
 Russelville, 107  
 Rutland, 78  
 Rutter, Dr. David, 426, 427, 491, 492  
 Ruud, Dr. Helga, 441  
 Ryan, Dr. Lawrence R., 145; Biography of, 277  
 St. Charles, 371, 403; Franklin Medical College, 155; Grave Robbing, 385, 386  
 St. Clair County, 85  
 St. Francisville, 107  
 St. John, Dr. Leonard, 431, 434  
 St. Louis, 129, 144, 195, 292, 378; American Medical Association, 40; Medical Journalism, 484; Medical Review, 484; University, 404  
 St. Luke's Hospital, 340, 429  
 Salicin, 132  
 Salicylic Acid, 127, 132  
 Salisbury, Dr.——, 422  
 Salisbury, J. H., 358  
 Salmonsens, Ella M., 473, 480  
 Salt and Soda, Remedy, 109, 110  
 Sanitation, 33, 34, 109, 110  
 Sawyer, Dr. E. W., 219  
 Scarlet Fever, 241, 242  
 Schaefer, Dr. F. C., 185, 190, 191, 193, 263, 264  
 Schirmer, Dr. A., 354  
 Schloetger, Dr. George, 204  
 Schmidt, Dr. H. D., 345, 354  
 Schmidt, Dr. Otto L., 145, 315  
 Schoolcraft, 19  
 Schreck, Dr. Jacob, 147  
 Schryer, Grace Fay, 473  
 Schuchardt, Dr. G. W., 500  
 Schuchardt, Dr. H., 499  
 Schuhmann, Dr. H. H., 333  
 Schwarz, Dr. L. E., 264  
 Scientific Medicine Journal, 488  
 Scott, Dr. George H., 497  
 Scott County Medical Society, 498  
 Scudder, Dr. John M., 103  
 Scurvy, 124



- Sears, Dr. Paul, 107  
 Second District Medical Society, 490  
 Secord, Dr. V. C., 497  
 Sedillot, 195  
 Seguin, Dr. Edward, 121, 126  
 Senn, Dr. Nicholas, 83, 89, 102, 197-201, 204, 345, 355, 412, 421, 438; Biography Reference, 504; Medical Library, 470  
 Senn Collection, 464, 470  
 Sewall, Dr. Thomas, 379  
 Seymour, Dr. F., 172  
 Shambaugh, Dr. George E., 264, 301; Biography of, 304  
 Shastid, Dr. Thomas Hall, 468, 506; Biography of, 278'  
 Shastid, Dr. Thomas Wesley, 95, 468  
 Shaw, Dr. Carrie, 453  
 Shawgo, Dr. J. B., 469  
 Sheffield, Hon. T. A., 398  
 Shelby County, Trachoma in, 21  
 Shelbyville, 240  
 Sherman, Dr. J. S., 171  
 Shipman, Dr. George Elias, 481; Biography of, 248  
 Shippen, Dr. William, 371  
 Shirreff, Patrick, 33  
 Siegfried, Mary H., 505  
 Simmons, Dr. George H., Medical Journalism, 480, 485, 486  
 Sims, Dr. J. Marion, 63  
 Sippy, Dr. Bertram W., 146, 204  
 Skiagraph, 95  
 Skin Diseases in Early Illinois, 306  
 Skinner, Dr. M. D., 52  
 Slater, Catherine Branan, 445  
 Slater, Dr. L. B., 224  
 Smallpox, 63, 110, 111, 113, 114, 151  
 Smillie, W. G., 5  
 Smith, Dr. Carter, 126  
 Smith, Dr. Charles Gilman, 308, 444; Biography of, 309, 310  
 Smith, Dr. David S., 450  
 Smith, Dr. Thomas, 167  
 Smithville, 185  
 Snake Root, White, 18, 22  
 Snakes, Poisonous, 18  
 Snyder, Dr. John F., 128  
 Societies, Internal Medicine of Chicago, 89; Medical, County, 491, 492, 505; Medical, District and Regional, 492-501; Medical, Early, 489-501; Medical Examiners of Chicago, 89  
 Soda and Lime, Sulphates of, 119  
 Soda and Salt, Remedy, 109, 110  
 Sodium Chloride, 111, 112  
 Solenberger, Dr. A., 301  
 Solidified Milk, 113  
 Southern Illinois Medical Association, 499, 500; Monthly Journal, 483  
 Spafford, Mr. H. G., 427  
 Sparta, 185, 225, 331  
 Sparteine Sulphate, 138, 139  
 Speaker, Dr. W. T., 296  
 Specialism, Medical, Indian, 92-94; Medical, Rise of, 91-98; Modern, 94-96; Obstetrics and Gynecology, Rise of, 213-238; Primitive, 92-94  
 Speed, Dr. Kellogg, 153  
 Spencer, Dr.—, 494  
 Sponge Grafting, 184, 331  
 Spotted Fever, 119  
 Springfield, 36, 46, 54, 66-68, 75, 76, 80, 81, 85, 86, 112, 163, 193, 255, 483; as Capitol, 383; Medical Legislation Committee, 87; Sanitation, 34  
 Standley, Dr. J. W., 333  
 Stark County, 44, 252; Medical Society, 252, 482, 492  
 Starkey, Dr. Horace M., 259, 260, 264; Biography of, 273, 274  
 State Board of Health, 177; Act, 148  
 State Health Department, 494  
 State Microscopical Society, 354  
 State Vaccine Laboratory, 138, 145  
 Stearns, Dr. W. M., 284  
 Steel, Dr. Hugh, 490  
 Steele, Dr. D. A. K., 172, 188, 192, 201, 431, 433, 434, 437, 476  
 Steele, Dr. E. A., Medical Journalism, 482  
 Steele, Eliza, 33  
 Steele, Dr. J. M., 45, 48  
 Steele, Dr. James S., 494  
 Steere, Miss Anne E., 477  
 Stehman, Dr.—, 422  
 Stein, Dr. Otto J., 301  
 Stephens, Dr. A. D., 160  
 Sterling, 48, 117  
 Stevens, Dr. George, 259  
 Stevens, Dr. J. V., 487  
 Stevenson, Dr.—, 475  
 Stevenson, Dr. Sarah H., 62-66, 68, 77, 86, 178, 445  
 Stimulants, 113; Essays on, 39  
 Stockton, Dr. Frank O., 285  
 Stomach Diagnosis with X-Ray and Bismuth Emulsions, 504, 505  
 Stone, Dr. Willis C., 309  
 Stone, Eric, 17  
 Stormont, Dr. D. W., 45-47, 50, 51  
 Stremmel, Dr. S. C., 498  
 Strong, Dr. Albert B., 75, 395, 396, 398-400, 420

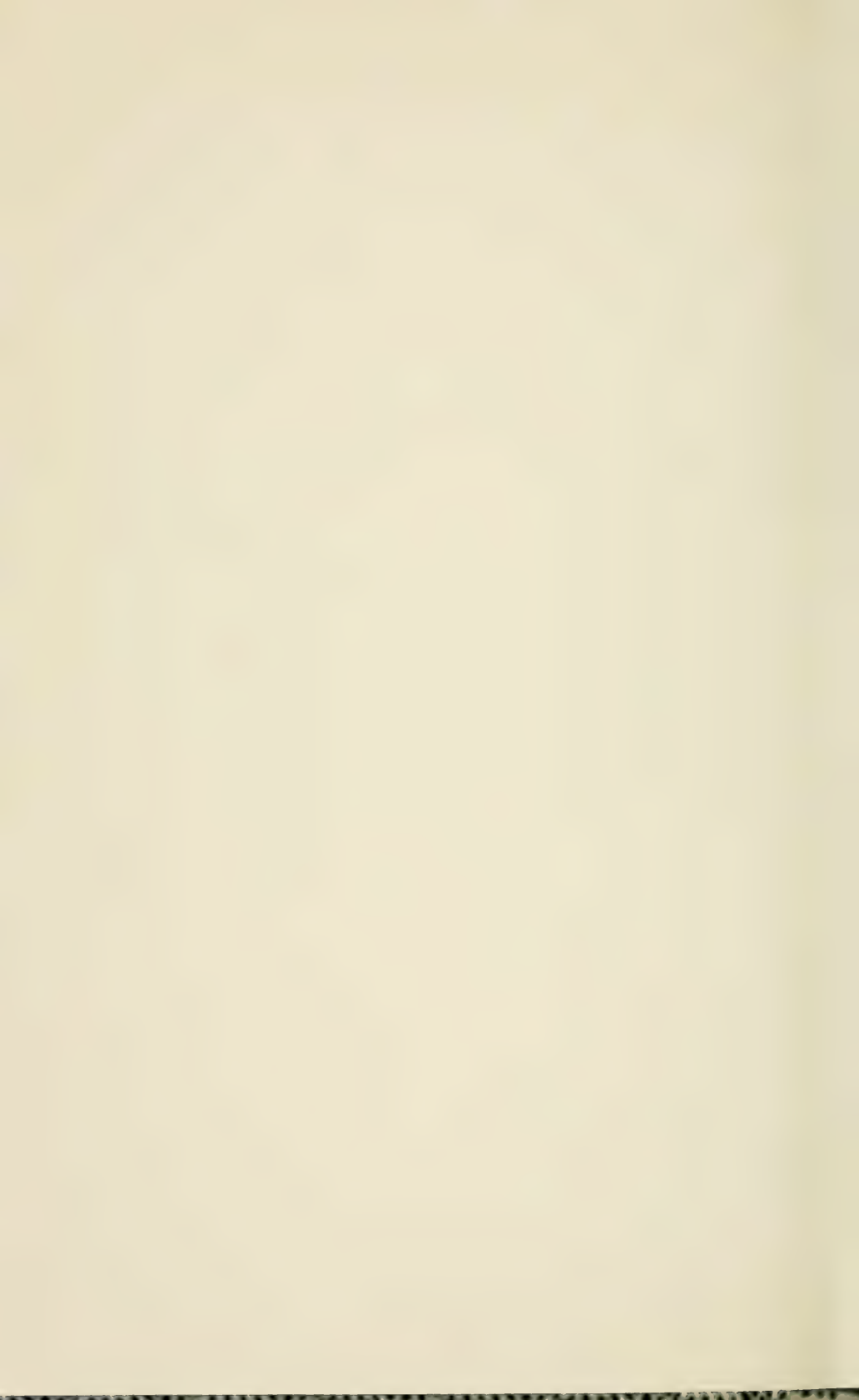
- Strong, Dr. R. M., History of Loyola University School of Medicine, 508  
 Strophanthus, 138, 147  
 Strychnine, 113  
 Stuart, Dr. E. B., 357  
 Stuart, Dr. James H., 111  
 Sulfonal, 139  
 Summers, H. E., 411  
 Surgeons, Biographies of, 204-209  
 Surgery, Civil War, 201-203; General, 153-210; Indian, 15; in Medical Publications, 157-199; in The Medical Schools, 155-157; Plastic, 329-338; Plastic and Reconstructive, 329-338; Primitive, 93  
 Surgical Procedures prior to 1875, 105  
 Surgical Societies, 199-201  
 Sutton, Dr. E. M., 197  
 Sweet Quinine, 123  
 Swing, Alice, 286  
 Sycamore, 215
- Taft, Dr. C. S., 120  
 Taft, Don Carlos, 411  
 Talbot, Dr. E. S., 337, 406, 422  
 Talbot, Dr. Rose, 446  
 Tarnier's Forceps, 177  
 Tarr, Dr. G. S., 107  
 Tartar Emetic, 119, 132  
 Taylor, Dr. M. K., 427  
 Taylor Brace, 167  
 Territorial Medical Practice Act, 489  
 Territory of Illinois, 362  
 Therapeutic Medicine, 486  
 Thermometer, Clinical, 123  
 Thomas, Dr. Homer M., 301  
 Thompson, Dr. A. H., 497  
 Thompson, Dr. Lucius G., 495  
 Thompson, Dr. Mary H., 189, 218, 245, 442, 443, 445, 448  
 Thompson, Dr. Samuel, 41, 107, 110-112, 114, 115, 493  
 Tilley, Dr. Robert, 258, 296, 297; Biography of, 304  
 Tilton, Mrs. Lucretia J., 1880, 473  
 Tobacco Chewing, 31, 32, 35  
 Todd, Dr. Charles, 218  
 Todd, Dr. John, 490  
 Tompkins, Dr. J. Elizabeth, 309  
 Tonics, Essays, 39  
 Tonney, Dr. Fred O., 357  
 Toulon, 40, 41, 113, 385, 495  
 Tourniquet, Aortic, 177  
 Trace Elements, 18, 24  
 Tracheotomy, 117  
 Trachoma, 18, 20, 21, 266  
 Training School for Nurses, 473-479
- Transactions of the American Surgical Association, 188  
 Transactions of the Illinois State Medical Society, 506  
 Transfusions, 117, 126, 175, 176  
 Treat, Dr. H. J., 287  
 Tribute to Lincoln, 51, 52  
 Trimble, Dr. D. B., 121  
 Tri-State District Medical Association, Journalism, 487  
 Tri-State Medical Society, Journalism, 487  
 Trollope, Mrs., 29, 31-34  
 Trowbridge, Dr. S. T., 54, 55, 388, 391  
 Truesdale, Dr. Calvin, 60, 137, 159, 169, 179, 183, 187  
 Trumbull, Dr. Laurence, 290  
 Trustee, Medical Journal, 480  
 Trypsin, 1885, 137  
 Tubercle Bacillus, 148, 242-244, 347-351, 354, 355, 358  
 Turck, Dr. Fenton B., 196  
 Turpentine, Oil of, 112  
 Tuthill, Dr. J. J., 283  
 Typhoid Bacillus, 131, 150, 151, 243
- Union College of Law, 283  
 Union County, 44, 483; Medical Society, 500  
 Union Grove, Medical Society, 492  
 Union Medical Association of Southern Illinois, 496  
 United States, Educational Statistics, 69  
 United States Marine Hospital, 39, 40, 417, 419  
 United States Medical Investigator, 482  
 United States Medical and Surgical Journal, 481, 482  
 United States Military Hospital Service, 144  
 University of Chicago, 146, 283, 360, 406, 412, 423, 462, 463  
 University of Illinois, 102, 104, 138, 156, 354, 360, 410-412, 431, 433, 437-440  
 Ununited Fractures, 159-162, 167  
 Urbana, 63-65, 240  
 Urethane, 138
- Valin, Dr. H. D., 344, 345  
 Van Brunt, Dr.—, 494  
 Van Hook, Dr. Weller, 144, 194, 201  
 Van Hoosen, Dr. Bertha, 448  
 Vandalia, 42-44, 81, 82, 114, 159, 160, 254, 483; as Capitol, 367, 383, 384; Medical Society, 496  
 Vaughan, Dr. Victor C., 84, 143, 193

- Veatch, Dr. William H., 83, 121, 188  
 Veratrum Viride, 117, 124, 132, 134, 139  
 Verity, Dr. W. P., 181, 185, 193  
 Vermilion County, Medical Society, 89  
 Vermin, 31  
 Vilas, Dr. Charles, Biography of, 274  
  
 Wadsworth, F. L., 406  
 Waite, Dr. Frederick, 413  
 Walker, Dr. J. P., 126  
 Walker, Dr. John Burgess, Biography of, 274, 275  
 Walker, Dr. Samuel Johnson, Biography of, 250  
 Wallace, Dr. William S., 508  
 War Surgery, 201-203  
 Wardner, Dr. Horace, 128, 163, 428, 483, 500  
 Ware, Dr. Lyman, 118, 259, 261, 263, 283; Biography of, 271, 272  
 Warren, Dr. John, 386  
 Warren, Dr. Joseph, 88  
 Warren County Medical Society, 89, 506  
 Washburn, Dr. Thomas D., 106, 125, 290, 483, 493, 494  
 Water, Drinking, 33  
 Watry, Dr. Joseph, 287  
 Watseka, 124  
 Watson, Dr.——, 54  
 Watson, Dr. Thomas, 103  
 Waukegan, 136, 140, 142, 146, 240  
 Waverly, 119, 254  
 Waxham, Dr. Frank E., 285, 286, 288, 296, 297, 438; Biography of 249, 305  
 Weaver, Dr. George H., 144, 145, 204, 342, 349, 356, 357, 471, 506, 507  
 Webster, Dr. C. E., 185, 187  
 Webster, Dr. George W., 143, 408  
 Webster, Dr. Stuart, 263, 264  
 Weekly Medical Review, The, 484  
 Weekly Medical Review and Journal of Obstetrics and Diseases of Women, 484  
 Weir, Dr. Robert F., 346  
 Welch, Dr. W. W., 494  
 Wells, Dr. H. Gideon, 204, 340  
 Wendell, U. G., 409  
 Wenger, Dr. Elias, 77, 138  
 Wenona, 499  
 Wescott, Dr. Cassius D., 261, 263, 341  
 Wesener, Dr. John A., 463  
 Wesley, Dr. Allen A., 197  
 Wesley Hospital, 190, 264, 408, 429, 430  
 West, Dr. Washington, 131  
 West Chicago Medical Society, 340  
 West Side Free Dispensary, 435  
 West Side Hospital, 437  
 Western Clinical Recorder, 488  
 Western Medical Reporter, 484, 486  
 Whalen, Dr. Charles J., 283, 487  
 Whiskey, 32, 35, 110  
 White, Dr. G. L., 177  
 White, Dr. John L., 66, 85, 172  
 White County Medical Society, 89; Trachoma in, 21  
 White Snake Root, 18, 22, 151  
 Whiteside County Medical Society, 491, 492  
 Whiting, Dr. J. D., 185, 186  
 Whitmire, Dr. James S., 48, 64, 117, 124, 128, 162, 199, 254, 499  
 Whitney, Dr. E. W., 263  
 Whittaker, Dr. James A., 144  
 Whitten, Dr. Thomas J., 235, 236  
 Whooping Cough, 243  
 Wiggin, Dr. T. B., 410  
 Wild, Dr.——, 198  
 Wilder, Dr. William H., 261, 263  
 Will, Dr. O. B., 84, 143, 193, 229-231, 233, 236, 237, 505  
 Will County, 44, 382, 383  
 Williams, Dr.——, 494  
 Williams, Dr. H. B., 265  
 Williams, Dr. J. S., 292  
 Williams, Dr. John W., 507  
 Williams, Dr. Steven, 113  
 Williams, Dr. W. W., 466  
 Wing, Dr. E., 315  
 Winnebago County, 44, 113; Medical Society, 492; Trachoma in, 21, 266  
 Winslow, Dr. W. H., 296  
 Wire, Dr. G. E., 83  
 Wolverton, Dr. G. D., 106  
 Woman's Christian Temperance Union, 70  
 Woman's Hospital Medical College, 218, 443  
 Woman's Medical College, 218, 297, 298, 309, 358, 441-449, 460, 461  
 Wood, Dr. Casey A., 261, 262, 265; Biography of, 272, 273  
 Wood, Dr. George W., 103  
 Wood, Dr. Thomas, 371  
 Woodford County Medical Society, 499  
 Woodruff, Dr. Harry, Biography of, 278  
 Woodstock Medical College, 382, 386  
 Woodyatt, Dr. William H., Biography of, 274  
 Woolen, Dr. L. J., 125  
 Work of the Physicians During the Chicago Fire, 507  
 Worrell, Dr. Thomas F., 78, 130  
 Wrenn, Sir Christopher, 175  
 Wright, Dr. John, 140  
 Wright, Dr. N., 54, 120, 121



- Wright, Mrs. Edward, 479  
 Wright, Rev. J. Ambrose, 428  
 Wyanet, Dr. Robinson, 139  
 Wylie, Dr. S. M., 332  
  
 X-Ray, 196; Diagnostic Studies, 505; Dis-  
     covery and Use, 95  
  
 Y.M.C.A. College, 408  
 Yabe, Dr. T., 349, 350  
 Yandell, Dr. L., 177  
 Yates, Richard, 78  
  
 Yearbook Series, 488  
 Yellow Fever, 18, 20  
 York, Dr. S., 51, 388, 391  
 Young, Dr. D. W., 60, 221  
 Youngberg, Dr. Paul P., 506  
  
 Zeisler, Dr. Joseph, 138, 309; Biography of,  
     312, 313  
 Zeit, Dr. Robert, 340  
 Zeuch, Dr. Lucius H., 20  
 Zimmer, Frances C., 36

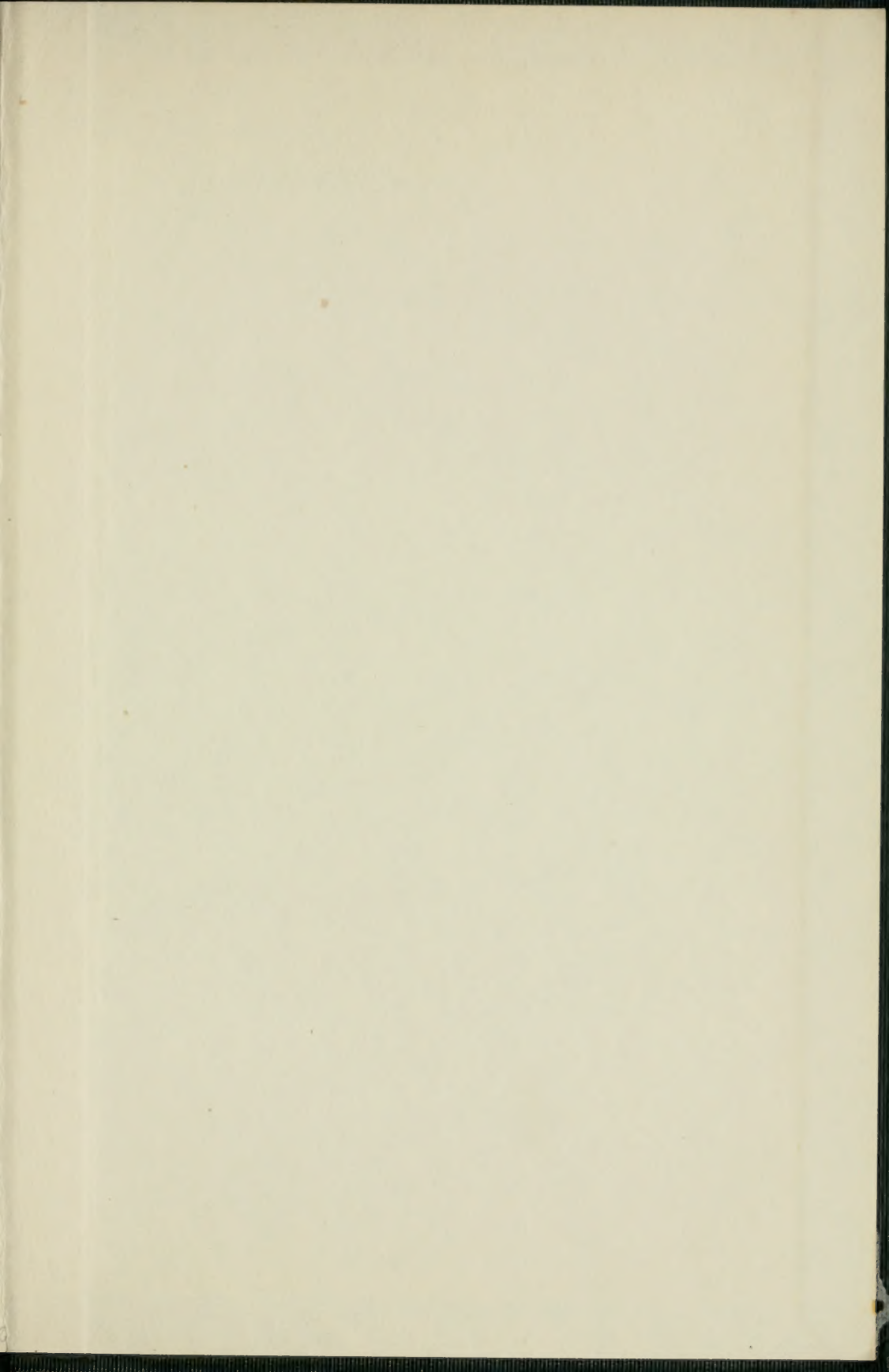






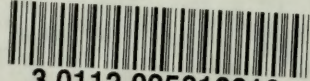








UNIVERSITY OF ILLINOIS-URBANA  
610.9773IL6H C005 V002  
HISTORY OF MEDICAL PRACTICE IN ILLINOIS



3 0112 025313013